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Management Review

JULY, 1954

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JULY, 1954

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FRONTIERS UNLIMITED: THE PROMISE OF TECHNOLOGY

FROM the beginning to modern times, the economy of this country, as indeed that of all countries, has been a matter of adapting the land to human needs.

The wealth of nations for centuries was determined by the fertility of their soil and the value of such natural treasures as could be found upon the land. Discovery of the North American continent came at a time when the world's traditional resources were sorely strained. The wilderness of America offered new hope; land was plentiful, and there was always the frontier, with millions of acres available to those who sought opportunity.

Today the old frontier, in the geographical sense, has virtually disappeared. The last of the "free land" was homesteaded long ago, and such public lands as remain are leased for specific use or are in park or forest reserves. Some pessimistic observers seem to view this with dismay and make much of the fact that no frontiers remain to challenge the enterprise and the initiative of the people.

They are, of course, wrong. More land is not the whole answer to a higher standard of living. In Europe in the 15th century, just prior to the discovery of America, the ratio of land to people came to 24 acres per person. In the U. S. today, the ratio of land to people works out to 12 acres per person—half as much. Yet the European with 24 acres knew little beyond want, while the American with 12 acres lives amid abundance which would have astonished kings in the days of Columbus.

The reason behind this advancing living standard is that in the past century we have applied to our economic problems the advancing techniques of science, or what we term technology.

American technology has made it possible for the land to produce on every acre a quantity of food exceeding many times the output of a century ago. It multiplies human efforts in remarkable ways. For example, it has been estimated that one chemical worker making 2, 4-D weed killer is about equal to 800 farm workers chopping weeds with the hoe.

But our great progress in agriculture is only a short chapter in the story of industrial technology. We have now opened up a whole new stage for our national development, a stage on which the elements of the land and the people are augmented by a third dimension—the dimension of science.

Today, for the first time, we have the means to add without subtracting, to pay Peter without robbing Paul. Industrial technology provides the extra food on the table, the extra mile on the speedometer, the extra dollar in the wallet. It is the extra bushel in the barn, the extra suit in the closet, the extra diploma at commencement time. It is the extra hours of leisure, the extra years of health and of life, the extra measure of security.

It seems obvious that a potential enemy, if he were to set about devising a plan to weaken the U. S. and make it most vulnerable to attack, would strike at us best by choking off our most vital

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artery—the lifestream of our technology.

History has shown that the big jobs in technology can be undertaken best by large industrial units. Our enemy should therefore find ways to handicap large-scale operation and to bring about the break-up of the large corporations.

Technology progresses only when there are sufficient incentives to encourage both discovery and commercial development. The heart of this incentive is the American patent system. A good way to throttle all technology would be to change the law so that neither the inventor nor the producer could count on any period of patent protection.

Technology requires personal incentives for the scientist, the investor, and for business management. The tax system could therefore be used to penalize further the abler and more energetic people so that their efforts can be minimized.

Technology requires large pools of capital, amassed through thrift and enterprise. With the most likely sources for its accumulation already blocked by rigorous personal taxation, the creation of capital could be further hampered by such legislative measures as putting a limit on profits and restricting the reserves for depreciation and reinvestment of business earnings.

Technology requires smooth and harmonious working relationships between management and labor. An effective method of disruption would be to obscure their understanding of each other by making it illegal for employers and individual employees to discuss labor matters of any kind.

Technology requires worker acceptance and understanding. A diligent enemy would encourage labor groups to fight new tools and new improvements

—From an address by HENRY B. DU PONT before the Kinston (N. C.) Chamber of Commerce.

by spreading the lie that technology steals jobs and creates unemployment.

Technology requires a free market in which the consumer can select the best possible product at the lowest possible cost. This can be upset by artificial competitive restraints. A producer whose product gets far ahead of his competitors could be so handicapped that next time he won't be so smart.

Perhaps in this Blueprint for Weakness we can see a Blueprint for Strength. Our enemies would render us helpless by destroying our technology. It should be obvious that we can best protect ourselves by doing everything possible to strengthen and preserve that technology against all enemies, foreign and domestic.

Our most effective weapon is the clear, cool light of understanding. Technology is a new force and a complex one. Sometimes, where it is not clearly understood, it does give rise to misgivings, and fears can be fanned into a flame by adroit use of the well-placed whisper. Therefore, we must strive to make ourselves understood, to the end that everyone, everywhere, will recognize the great potential for good that lies before us.

Travel on the new frontier has its perils and its problems as well as its promise. The dangers that lurk in the thickets are not less deadly because they are dangers of the mind. They must be met and overcome, just as difficulties have been met and overcome at every stage and on every frontier of our history.

We know that the path of technology is before us and that we have the opportunity to travel far. And we know, too, that no matter how twisting the course or steep the climb, it is a path that will lead to a brighter and stronger tomorrow.

THE PROSPECTS ARE BRIGHT

THE MOST conspicuous fact about recent views of the American economy has been their excessive pessimism.

The actual performance of our economy has far outrun even the most optimistic expectations. Yet, although the pessimists have a perfect record of being wrong, they continue to predict grave troubles ahead. Now that the shooting has stopped in Korea, they warn us that demand is about to fall short of productive capacity. If our \$50-billion defense program is cut by \$12 billion a year, where, they ask, will the demand come from to offset this decrease?

Actually, if the hoped-for cuts in defense spending can be made, tax cuts will make possible a rise in private demand almost as large as the drop in public demand. Unemployment may be higher than the abnormally low rate of around 2.5 per cent of recent years, and there will certainly be less overtime work than there was in 1953. But the principal effect of a drop in defense spending will be to shift the demand for goods, not to reduce it.

As a matter of fact, the longer-run prospects of the economy are extraordinarily bright. In part, this is due to the rapid rate at which population has been increasing—more or less a happy accident from the standpoint of the expansion of the economy. This rapid growth of population both increases the demand for investment-seeking funds and tends to hold down the volume of personal savings. With investment opportunities tending to outrun savings, some investment is financed by credit rather than out of current incomes. The result is that expenditures tend to exceed recent incomes—plainly a condition that greatly

facilitates the maintenance of a high level of employment.

But the principal reason for the bright outlook for our economy is the enormous development of industrial research. Expenditures on organized research in industry in the eight years beginning with 1946 have been more than twice as large as the total for all previous years up to 1946. In the last eight years, industry has spent \$9.5 billion on research. And the research expenditures of the government, which have been nearly \$11 billion since the beginning of 1946, are also more than twice as large as all research outlays by the government before 1946.

By giving industry far greater control over the demand for goods than ever before, research is removing the specter of inadequate markets that has haunted business men since the Great Depression. Research affects the demand for goods in three principal ways: First, by creating new kinds of goods or improved goods, which encourage people to spend more on current consumption and to save less. Second, by increasing the need for machines and buildings to make the new kinds of goods, thus stimulating spending on capital goods. Third, by developing new methods of making goods, thus reducing the life of existing capital and increasing the amount that it is advantageous to spend on replacements. In these several ways, technological research tends to bring about an expansion of spending.

While we cannot be absolutely certain that technological research will not so increase the capacity of industry to make goods that supply will outrun demand, such a result is extremely unlikely. Since

technological progress gives favorable bargaining opportunities to unions, it tends to produce larger money incomes. Moreover, nearly half of technological research is devoted to creating new processes and products—which, if intended for personal consumption, tend to stimulate consumer buying and to discourage saving. With investment opportunities being increased, the demand for investment funds will tend to outrun the volume of savings, and thus expenditures will expand.

The real significance of industrial research is that, for the first time in the

history of private enterprise, business is able within wide limits to control the demand for goods. It can set production and employment goals years ahead and expect, by the method of discovering and developing new products and new methods of production, to achieve those goals. This new control over the long-run trend of demand enables us to view the economic future in a new light—not with a mixture of hope and fear because anything might happen, but with quiet confidence that the demand for goods can be made to grow as rapidly as our capacity to produce goods.

—SUMNER H. SLICHTER. *The Atlantic Monthly*, June, 1954, p. 31:3.

The Receding "Recession"

A NEW OPTIMISM about business prospects in the coming months was displayed by business men queried this spring in *Fortune's* semiannual survey of executive expectations.

Nearly half of the respondents expected an upturn in their sales in the next six months. They expected, not a big boom, but gains from present levels. That is a big switch in feeling since last fall.

Less than a fifth of the executives in the 20 cities covered by the latest survey expected a decline in sales. Six months earlier, by contrast, less than a fifth had looked for a rise, while more than a third had anticipated a decline in sales. The current optimism is nearly as widespread as it was in the early autumn of 1952. And it is worth noting that within six months of both these earlier forecasts, the rate of industrial production changed about 6 per cent.

The optimism reflected in the latest survey is, on the whole, temperate as regards immediate business prospects. Twelve months from now, however, most of the executives expect a somewhat more pronounced improvement in business.

Why the strong resurgence of confidence? One-third of the executives still seem to be worrying about recession psychology ("that damned poppycock about the economy going to pot") or consumer confidence ("people have been a little scared"). But the fears are less sharp than six months ago ("the panic is off"), and they are counterbalanced by the sentiment that "there is plenty of money around," and that it is simply a matter of "making people want to spend."

Business men are still concerned about unemployment, the farm market, and possible overexpansion of industrial capacity. But the one continuing influence they are acutely aware of (it has been mentioned in all surveys in the past two years) is competition. Fortunately, most business men still view competition as a "challenge, not an ordeal" and say "those who will survive will be stronger and will gain in the long run." So, without question, will the economy.

—*Fortune* 5/54

TEN GUIDES TO BETTER GROUP DECISION-MAKING

PROBABLY NO serious estimate has ever been made of the amount of time American business men spend annually "in conference." Yet the total number of hours must be staggering. Most important business decisions are made "in conference," and they normally require a long series of further conferences for their implementation.

Yet think how little we know about the actual operation of a committee, and how little we are able to predict or control its success or failure. Considering what can happen to a "good idea" by the time it emerges from the other end of a committee operation, it is no wonder that committee meetings are often viewed with mixed feelings of apprehension and cynical humor.

Not many years ago nobody seriously supposed that the subtle aspects of face-to-face human relations could be studied experimentally in the laboratory. There was skepticism even among social scientists when a few of their more hopeful colleagues began to set up small groups of subjects under laboratory conditions and to study social behavior by direct observation. Today, however, a number of such laboratories are in operation, and findings of possible practical importance are beginning to appear.

One of the early installations was set up in 1947 by the Laboratory of Social Relations at Harvard University. While it is hazardous to generalize too freely on the basis of the findings to date, here is a summary of "rules of thumb," based on the experience of observing many laboratory groups, which may be helpful in pinpointing some possible applications:

1. Avoid appointing committees larger than seven members unless necessary to

obtain representation of all relevant points of view. Try to set up conditions of size, seating, and time allowed so that each member has an adequate opportunity to communicate directly with every other member.

2. Avoid appointing committees as small as two or three members if the power problem between members is likely to be critical.

3. Choose members who will tend to fall naturally into a moderate gradient of participation. Groups made up entirely of high participators will tend to suffer from competition. Groups made up exclusively of the opposite type may find themselves short on ideas.

4. Avoid the assumption that a good committee is made up of one "leader" and several followers. Laboratory findings, while still tentative, indicate that the man who is judged by the group members to have the "best ideas" contributing to the decision is not generally the "best-liked." There are two separate roles: task leader and social leader. Try to provide the group with leaders to fill these roles who will support one another.

5. In actual procedure, start with facts if possible. Even where the facts are thought to be well known to all the members, a short review is seldom a waste of time. A good general procedure is probably to plan to deal with three questions on each major agenda item:

"What are the facts pertaining to the problem?"

"How do we feel about them?"

"What shall we do about the problem?"

This is probably the preferred order. Take time to lay the groundwork before getting to specific suggestions, the third

stage. It may be noted that the order recommended is the exact opposite of that which is characteristic of formal parliamentary procedure.

6. Solicit the opinions and experiences of others, especially when disagreements begin to crop up. People often think they disagree when actually they simply are not talking about the same experiences. Try to get past the words and general statements the other man uses to the experiences he is trying to represent.

7. When somebody else is talking, listen, and keep indicating your reactions actively. Most people are not much good at reading your mind. Besides that, they need the recognition you can give them by your honest reaction, whether positive or negative.

8. Keep your eyes on the group. When you are talking, talk to the group as a whole rather than to one of your cronies or to one of your special opponents.

—ROBERT F. BALES. *Harvard Business Review*, March/April, 1954, p. 44:7.

Search around constantly for reactions to what you are saying. A good deal of communication goes on at a sub-verbal level. Nothing tones up the general harmony of a group like a good strong undercurrent of direct eye contact.

9. When you scent trouble coming, break off the argument and backtrack to further work on the facts and direct experience. In some instances the best way to get started on a cooperative track again after a period of difficulty is to agree to go out and gather some facts together by direct experience.

10. Keep your ear to the ground. No recipe or set of rules can substitute for constant, sensitive, and sympathetic attention to what is going on in the relations between members. Do not get so engrossed in getting the job done that you lose track of the first prerequisite of success: keeping the committee in good operating condition.

WILL "CYBERNETICS" DO AWAY WITH PEOPLE?

SUDDENLY, the wonders-of-science writers have got hold of "automation," and are picturing the marvelous new world it is going to bring about. And scaring the daylight out of the fellow with a job.

Production controlled by instruments, problems solved by electronic brains, no more drudgery, no more boring tasks—and a six-hour day, a three-day week, two cars in the garage, a chicken in every pot. The big problem is going to be what to do with the new leisure.

Electronic brains will predict election results, or forecast the weather, or solve

complicated problems of jet propulsion, guided missiles, and the intricacies of corporation affairs.

Push-button factories are going to take in raw materials at one door and spew out commodities at another: consumer goods ready-wrapped, complete engine blocks, household appliances, whatever is wanted.

Then there is paper work—automation coming to the office. Figures are marshaled to demonstrate that paper work is really doing us in, unbeknownst. But tomorrow, business machines will take over. No more coffee breaks! No

more gathering round the water-cooler for scuttlebutt. There will be nobody to gather. Robots everywhere, and the Old Man all alone, watching pointers on dials.

But the fellow with a job is turning the picture over, looking at the back.

"Huh? Machines doing everything?" he ponders. "Things made so cheap I can afford to buy twice as much of everything? No people needed, nothing but gadgets? What becomes of my job, and me? How do I buy these things without a pay check? Something here needs to be explained."

There is a craving for job security. Guaranteed wages and a minimum working year are being argued. Automation is cropping up in collective bargaining. The questions being raised by automation call for answers from management.

It happens that in the utility field automation has been going on for more than a generation. It has been comfortably lived with. Seldom has anyone ever had to worry about being "improved" out of a telephone job.

In telephony, there appear to be at least three answers that have value for management in other industries, where automation is developing.

First, telephone mechanization has always been planned so far ahead that employees could be taken care of, and have been. There have been wonders as revolutionary as any, but never coming unexpectedly.

Second, telephone management has been keen about job training. Even before the war, during which the military worked out new, fast-training techniques, the telephone business had had to train people in new jobs brought by improvements and also for individual advancement.

Third, telephony has long had a strong

"sense of company." It gives employees the feeling that they work for a fine organization, that the company will always be hep to what cooks, that it is thinking about its people. "No matter what the engineers develop," telephone employees say, "I should worry about my job—this company will look out for me."

Long, long ago, telephone engineers got busy on the push-button principle. Telephony had an "electrical brain" in 1912, before electronic tubes appeared. When the subscriber sought a number, it started looking for a channel. Dial mechanism today seeks the fastest channel, goes around if it runs into a busy signal, finds another path, all in seconds.

A representative job of telephone mechanization has been going on among California companies since 1940, with acceleration at war's end in 1946. Many old manual stations were converted to dial, and of course all new exchanges built were modern. So there was a great elimination of switchboard jobs. But the total work force was more than doubled, from 27,000 employees in 1940 to 64,000 in 1951.

A typical project is Riverside, in southern California, which next fall will be cut over to dial operation.

On a manual basis, Riverside's old switchboards employed 240 women operators. With dial operation, about 150 will be needed. The normal number of quits in a year would be around 90, so new hirings are suspended a year ahead, automatically adjusting the number of women employees.

Meanwhile, regular operators are being trained for dial jobs like information, interception, assistance to subscribers, long-distance traffic, and so on, needed when the cut-over is made. After the

cut-over, the regular rate of new hirings will be resumed.

Good selling has been part of the telephone business from the beginning. Its wonders of science have been publicized in terms of better service and lower rates to the public. And the customers have responded, increasing the volume of traffic. They have learned to talk more, and farther.

Telephone engineers are calm about automation. To them, it is just part of the mechanization that dates back to Watt's steam engine governor, Jacquard's perforated cards for weaving patterns. They see limitations overlooked by the wonder-mongers.

Recently, the engineers of a large control-instrument company did some im-

aginative figuring on an electronic brain that would be as good as a human brain. It would take the Pentagon to house it, they reported, the waters of the Mississippi to cool it, and the power load of a large city to run it. "Some day," they concluded, "the most elaborate electronic brain may be as good as the brain of an ant."

"Suppose everything does go push-button," the telephone engineers reason. "And suppose one little robot gets the bellyache. There will have to be bigger and better trouble-shooters to get the system perking again.

"If everything comes to push buttons, we will need a lot of push buttons. And we will probably have to hire people to make them."

—JAMES H. COLLINS. *Public Utilities Fortnightly*, May 27, 1954, p. 660:7.

On Making Things Happen

THE PRESIDENT of a well-known corporation was asked recently, "What do you consider the most important qualification of an executive in the present period of economic adjustment?"

Without a moment's hesitation he replied, "The ability to make things happen. Many men are sound thinkers, planners, and administrators. They carry on effectively up to the critical point. Then they pause and wait for a superior—or the pressure of events—to push them into the final step that will produce action and get results."

This president insists that each executive or supervisor in his own organization follow a standard procedure with every new man he takes on. Whenever any situation develops to the point where it is ripe for action, he asks the subordinate, "Do you think we should go ahead on this basis?"

If the man says "Yes," his superior casually says, "All right." Only that; no other instruction. The matter is left in the man's hands, with the tacit understanding that he is to start the machinery and carry the plan or project through to completion.

"Under this treatment," says this president, "a good man very soon begins to assume complete responsibility for getting results. In our organization a man receives little credit for a 'good try.' He must be able to make things happen, with the help and counsel of his associates, of course, but without orders or specific directions from anyone higher up. He is expected to keep his superior posted on what he is doing—but he alone is responsible for the starting and the completing."

—*Management Briefs* (Rogers, Slade & Hill, New York) No. 63

Weather Consultants Join Ranks of Business Experts

WEATHER, so long the scapegoat for retail sales slumps, can now be turned into an economic asset, Frank Romaine, special consultant to Weathercasts of America, declared at a recent meeting of the American Marketing Association.

As an example, he told of a drug manufacturer who has established a correlation between various weather factors and the incidence of hay fever and asthma outbreaks. He uses specialized forecasts of weather favorable to the sale of his product to advertise on radio and television.

Another speaker, Walter A. Lynch, Jr., an economist of Baxter International Economic Research Bureau, said that his firm had been conducting a great deal of research in the weather field and had arrived at these basic facts:

1. We are now in a long-range warm weather cycle.
2. There is a change in the seasonal pattern, with winters becoming warmer, shorter, and with much less snow.
3. The summer season is becoming hotter and dryer.
4. A sharp retreat of glacier ice in the North has occurred, while at the same time there has been an accelerated increase in the ocean's water level.

Not surprisingly, Mr. Lynch concludes that the industry in the best position of all is air-conditioning. Other lines that will do well, he said, are ice cream, soft drinks and beer, outdoor toys, outdoor furniture and accessories, garden equipment, sports clothes, and cars.

At the top of the list of businesses which will suffer he puts coal and fuel oil companies, commercial fishing, the book and magazine industry, and most phases of the wool industry. These people, according to Mr. Lynch, must face up to the fact that the weather is against them and either shift their markets accordingly or diversify with products that can take advantage of the changes.

—*Journal of Commerce* 4/29/54

The Clock Inside You

EACH OF US has a clock buried somewhere deep inside.

In some, this clock is too fast. The highest hopes of these people are sure to be realized—tomorrow.

In others, the clock is slow. They do today what they should have done yesterday and do tomorrow what they should be doing today. Business-wise, they're always just a little too late.

In a few, the clock has stopped. The "professional" college man, the perennial athlete, the life-long juvenile, and the man for whom time stopped at a moment of personal tragedy are all familiar figures. Some are amusing, some boring, some pathetic—but few are effective.

The lucky ones have a clock that keeps perfect time. They learn from the past, but never live in it. They plan for the future, but never count on it. They make the most of today.

How is your clock running?

—John C. Dowd, Inc., in *Advertising News* (The Advertising Club of Boston)

DEFINITION OF LEADERSHIP: "We are leading successfully, we are sensing the pulse successfully, when we get people to do the work we want them to do, in the way we want it done, when we want it done, because they want to do it."

PITFALLS IN PLANT SITE SELECTION

CHOOSING A NEW plant site is not only one of the most important and critical steps a company management can take, but also one of the most complex. Innumerable factors, both economic and social, must be weighed and evaluated as to their effect on successful plant operations. And a startling number of companies continue to select the "wrong" site for their new plants.

Interestingly enough, errors in plant site selection seem to fall into a pattern. Here are some of the most common errors:

1. *Lack of thorough investigation and consideration of factors involved.* This happens most often among companies whose managements "know instinctively what's best for us." If they've been brought up in sales, they're likely to pick their sites on the basis of distribution; if they are production men, it's more likely to be on the basis of raw-material availability or labor supply. All too often, such managements fail to realize that several minor factors, when compounded, can outweigh a single major factor.

2. *Personal likes and prejudices of key executives or owners, overriding impartially established facts.* Impartial, fully documented site surveys by both independent firms and the company's own engineering department are too often committed to the wastebasket because of a key executive's whim, bias, or misinformation. Often a member of management completely negates logical findings arrived at after weeks of study by a competent engineering group with a wave of the hand and the comment, "It just doesn't look right to me."

3. *Reluctance of key executives to move from traditional, established home ground*

to new and better locations. Site locations are limited in some instances to the choice of the best of a half-dozen parcels of land within easy driving distance of executives' homes and golf clubs—even though it could have been demonstrated that moving to a different part of the country would contribute to the financial well-being of the company.

4. *Moving to areas already or about to be over-industrialized.* In some instances, plant sites are selected on the word-of-mouth recommendation by one executive to another. President A of the ABC Company asks President X of the XYZ Company how his new plant in Doaksville is working out. "Great," says President X. "Great town, fine people, wonderful community." So President A decides he will take advantage of this paradise for his own company. Actually, the very fact that the XYZ Company moved to Doaksville may have made it a less desirable location for numerous reasons—for example, Doaksville may not have the labor supply for another large manufacturing operation.

5. *Preference for acquiring an existing structure (usually at an imagined bargain) which is improperly located or designed for the most efficient production.* There are three pitfalls to avoid when considering a move of this kind: first, be sure you've a good structure that won't cost you as much to rehabilitate as it would cost to erect a new building; second, be sure the building you buy will accommodate your manufacturing process and flow of materials at a minimum materials-handling cost; third, be sure the location of the building is right for your business.

6. *Choice of a community with cultural and educational standards so low that key*

administrative and technical personnel eventually accept employment elsewhere. The transfer of manufacturing operations from one plant to another or the establishment of a completely new plant always involves the movement of varying numbers of key personnel. Whenever a mass

—A. KINGSLEY FERGUSON (Vice President, Walter Kidde Constructors, Inc.). *Pacific Factory*, April, 1954, p. 70:1.

transfer of employees in higher classifications occurs, there are always some who can be expected to refuse to move regardless of the reward. Others will move only if they can be assured that educational facilities for their children compare with those they have at present.

WHAT DO THEY THINK OF YOUR COMPANY?

WHAT ARE they saying about your company in the barber shops around town?

A silly question? Caterpillar Tractor Company doesn't think so. Concerned with what the public thinks and says about their business, Caterpillar executives annually entertain local barbers at an open house and dinner, send them company publications, copies of annual reports, and news of plant operations. Similar attention is paid to local politicians, clergymen, cops, firemen and teachers.

The reason is a simple one: Such people are "opinion molders." They see and talk to hundreds of people daily, and what they say—or don't—about Caterpillar influences the way local citizens think about this company that employs one of every four wage earners in the area.

This grass-roots approach is one small part of a comprehensive community-relations program which costs Caterpillar something like \$135,000 a year, exclusive of corporate contributions.

That's a lot of money. But it pays off, the company is convinced.

Let's look at some other practices which companies across the nation pursue in this vital business of corporate neighborliness:

In Indianapolis, Eli Lilly and Company, a drug producer employing 7,000 workers, feels "an obligation to the city." At two Lilly plants, playgrounds have been built and equipped for kids. One covers 10 acres.

At Midland, Michigan, where Dow Chemical Company's 9,000 employees make up half the town's population, the company music program, one of the most ambitious in industry, annually attracts 12,000 listeners; the 3,000 musicians involved are a mixture of Dow employees and "neighbors." Dow helps underwrite the city school athletic program, too. At Freeport, Texas, Dow provides hospital facilities open to the public, and helps maintain a golf course and community center.

An outstanding example of community relations involves a Peoria, Ill., industrial firm, Keystone Steel and Wire Company.

Like many factories, Keystone had an air-pollution problem. It found a way to reduce smoke and fly-ash at its plant—and later adapted its abating equipment to help the city schools lick the same problem. Late last fall, Keystone's power plant superintendent helped install \$12,-

000 worth of smoke abatement gear in a local hospital, the last serious offender in town.

Monsanto Chemical Company has donated school bus shelters throughout Maury County, Tennessee. The Company has a plant at Columbia, the county seat.

When United States Steel began erection of its Fairless Works near Philadelphia, an unusual problem had to be met: old cemeteries and some historic old buildings were part of the building site. With guidance from Pennsylvania Historical Society archaeologists, two old cemeteries were moved to new locations. Building materials from several old structures were carefully dismantled and shipped to Virginia for use in a project to restore Mount Vernon.

General Motors has published a booklet, entitled *GM Lives Here*, which lists these accomplishments in the field of neighborliness:

One GM plant heated a hospital during a coal strike; another graded and equipped a school playground; others built Little League baseball diamonds, furnished trucks for salvage drives, made company auditoriums available to local organizations, established a residency in industrial medicine, lent engineers to help improve a school heating plant, and furnished technical assistance on design and construction of a hospital.

Another blue-chip corporation, General Electric, employs periodic surveys to determine community likes and dislikes, then acts to correct any marked unfavorable trends. Survey results, the company reports, have plainly indicated that the foundation for an effective plant community relations program is a good employee relations program. The average

employee, GE's surveys show, mixes regularly off the job with about 50 people.

The Nieman-Marcus department store in Dallas finds it pays to advertise civic pride as well as ladies' ready-to-wear. Its advertisements frequently feature tributes to the city's art exhibitions, summer theater, Boy Scouts, charity balls and other causes.

Kennicott Copper isn't a major producer of things farmers use, yet Utah farmers look to the company for tangible help in their problems—because Kennicott underwrites agricultural research and broadcasts the results.

So, to keep your community relations a potent factor in your operations, be a good corporate neighbor.

What are the elements of a good community relations program? What can your company do to win new friends and keep them?

The basic principle is simple enough: Keep in touch with your neighbors. Methods will vary from city to city and company to company, but basically the good-neighbor formula consists, as Standard Oil's public relations director, Conger Reynolds, puts it, of "wedding good deeds with communication."

For a simple explanation of the complex business of neighborliness, listen again to Reynolds:

"What do you do if you're a good neighbor? Get acquainted. Join with your neighbor in projects from which both of you will benefit. Help him in time of trouble. Talk things over with him. Find out what he thinks and what he wants of you. Explain your ideas and behavior to him, trying always to make him think you're at least as good a fellow as you are."

—THOMAS S. WATTS, *Commerce*, Vol. 51, No. 1, p. 14:8.

Also Recommended • • •

MANAGEMENT WITH AUTOMATIC PRODUCTION. By Charles E. Knight. *Mechanical Engineering* (20th and Northampton Streets, Easton, Penna.), April, 1954. 50 cents. The author describes management functions and organization in a hypothetical fully automatic factory, discussing in detail changes which will take place in such activities as policy-making, financing and accounting, product design, raw materials procurement, sales, and maintenance. With respect to product design, for example, the author predicts a shift to more functional commodities lending themselves to automatic production.

SOUTH BEND: CITY IN RECESSION. By Donald M. Schwartz. *Harper's Magazine*, (49 East 33 Street, New York 16, N. Y.), June, 1954. 50 cents. A detailed portrait of the "readjustment" that had to be made in one community of 115,000 when more than a million dollars a week was suddenly removed from its payrolls. Like an economic collapse in miniature, this highly localized "depression" is analyzed here in terms of its impact on many different types of businesses in the community and upon the residents suddenly confronted with a major unemployment problem.

AIR TRANSPORTATION—BLUEPRINT FOR PROGRESS. *Aviation Age* (205 East 42 Street, New York 17, N. Y.), March, 1954. \$2.00. This special issue, devoted entirely to the plans, problems, and needs of the air transport industry, presents a cross-section of the thinking of technical management men in the aircraft manufacturing and service industries, airlines, airports, government aviation bureaus, and companies operating fleets of executive aircraft. A large and well-illustrated section on business aviation includes detailed operating data and specifications on 13 different models of twin- or multi-engined executive aircraft, as well as brief factual descriptions of a larger number of single-engine planes.

THE ALCOHOLIC IN INDUSTRY. By Bruce B. Reeve, M.D. *Vital Speeches of the Day* (33 West 42 Street, New York 36, N. Y.), April 1, 1954. 30 cents. In this, one of the best papers that has been written on the subject, the author cites some dramatic figures on the incidence of alcoholism in industry, and draws up a detailed profile of the problem drinker and his characteristic behavior patterns. Also describes results of research on alcoholism at

Yale and the work of AA, which, in the author's experience as Director of the Medical Department at Standard Oil of Indiana, has been fully effective in 75 per cent of the cases referred to it.

HOW NOT TO MUFF A PRESS CONFERENCE. By Jerome Shoenfeld. *Sales Management* (386 Fourth Avenue, New York 16, N. Y.), Vol. 72, No. 4. 50 cents. As a class, business men hold the least effective press conferences, the author declares. Describing the major pitfalls into which most executives fall—providing too much entertainment, evading legitimate questions, and making speeches are just a few—he gives several pointers on making a press conference a success.

WHAT IS OUR BUSINESS? By Peter F. Drucker. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N. Y.), March, 1954. 75 cents. No business can long remain successful, the author maintains, if its management fails either to identify correctly the want which customers satisfy when they buy its product or service or to gauge accurately the business's ability to supply what customers consider "value." The function of any business, in his view, is the creation of customers through marketing and innovation.

RECENT BUSINESS POPULATION MOVEMENTS. By Betty C. Churchill. *Survey of Current Business* (Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.), Vol. 34, No. 1. 30 cents. This article presents the first general revision since 1949 of the business population estimates of the Office of Business Economics, and a brief review of significant trends. The number of operating businesses in the United States in mid-1953 reached a record of over four million firms.

THE PACE THAT KILLS. By W. Schweisheimer. *American Business* (4660 Ravenswood Avenue, Chicago 40, Ill.), Vol. 23, No. 9. 35 cents. According to insurance statistics, the average business man dies six years before his time—as a result of working too hard, under too much pressure. The pyramidal system of authority, with constant pressure for "results" and competition from other business concerns are among the factors responsible for this state of affairs. The author, a physician, suggests several ways in which the harried executive can fit mental, physical, and spiritual relaxation into his schedule.

Industrial Relations

DIAL 8 FOR NEWS

FOR MANY YEARS the progress of contract talks between a union and a company was a mystery wrapped in cigarette smoke and "no comments." Fact is, collective bargaining itself was sort of a high-dollar, back-room poker game with more than a touch of the arcane about it. Kibitzers—like the public, or even foremen and employees of a bargaining company—were unwanted and uninvited. "Wait till you have your signed contract in your pocket before you talk about its terms" was a principle generally observed by industry.

Of course, this very secrecy led to fast-flying rumors. And politically hep union bargaining teams used the grapevine effectively to back their arguments at the contract table. They knew that a judicious leak at an appropriate time had a profound psychological impact and could throw an entire plant into a case of Monday-morning jitters. "The company has already agreed to give 10 cents, but we're still trying for 15. . . ." "There'll be a strike. . . ." "Looks like the contract's in the bag. . . ." Stories like these ricocheted from department to department, accompanied by waves of optimism or despair. Employees were uncertain. Tension and anxiety cut production. Foremen couldn't knock down rumors because they didn't have any real facts.

Maybe it's the influence of TV, maybe it's just because we are growing up in industrial relations—but many a management is now opening the door to its bargaining room, and opening it wide. Giving supervisory executives a fast fill-in on

what's happened at today's contract talk so they can pass along the straight facts to workers has become a routine practice with many companies. But others are going even further.

There's the company letter to employees. It's frequently used to supply everyone from the sweeper to the department head with a running report on the progress of union negotiations. This prevents the spread of rumors, cuts gossip to a minimum, and clearly presents the management position on any issues that may be in dispute.

In addition to the letter to workers, some firms are employing a swifter means of communication to rush collective bargaining progress reports, hot from the contract table, to the ears of their people. Take the United States Metals Refining Company of Carteret, N. J. It has turned to the telephone to speed up extra-edition news to personnel. And this applies to collective bargaining.

Here's how the plan works. Say you are a U. S. Metals employee, and you want to hear what's happened in today's contract talks. You don't need a shop steward to tell you. You simply pick up the phone, dial Channel 8, and listen to a three-minute tape-recorded summary of the session. There's no "propaganda" or company slant on the story, either. It's a straight-from-the-shoulder digest of the facts.

U. S. Metals began its system two years ago at the suggestion of Jerome Youtz, Assistant Manager of Industrial Relations. At first, we were told, there was some

resentment on the part of officials of the Mine, Mill and Smelter Workers (Ind.), the union which holds bargaining rights at the plant. But the rank-and-file workers liked the idea right from the start. And because the company made no attempt to angle its news, labor opposition melted. Today Channel 8 is accepted as a matter of course. The U. S. Metals employee uses it as naturally as the housewife dialing in for the correct time or a report on the weather.

Company management is highly pleased with the system. Said one U. S. Metals executive: "It has helped to cut rumors, and it certainly gets information around in a hurry. Best of all, our employees know they can believe what they hear on Channel 8. Not once during the two years that we've had it has there been a single statement that wasn't completely and literally in line with the facts."

Aside from reports on collective bargaining, all kinds of company stories may be heard. When one of U. S. Metals' 1,800 workers picks up the phone and spins the news number, he may hear a

—JAMES M. BLACK (Manager, AMA Personnel Division).

safety talk, learn why a new machine has been purchased, or get the news that a colleague is retiring. Channel 8 has become a kind of talking bulletin board that's open for business night and day. A fresh message is put on each morning—and although employees may call in whenever they feel like it, this has in no way hurt production, says the management. Moreover, 10 people can phone Channel 8 at the same time without getting a buzz from the busy signal.

U. S. Metals is one of a growing number of firms that have added the telephone to their employee communications systems. That, in itself, may not be too important. But the very fact that progressive companies are constantly trying to utilize all means of communications to keep their employees accurately and quickly informed is indicative of management's desire to maintain a sound industrial relations climate. So perhaps it may be said that when employees at U. S. Metals dial Channel 8 for news, American management is dialing another Channel 8 for industrial relations progress.

Teaching Workers the Facts About Business

COURSES teaching foremen and workers how to read a company balance sheet, how company income is distributed, and how our economic system operates have grown ten-fold since 1945 and are being adopted in an ever-increasing number of companies. Their popularity with workers is attested by the fact that attendance seldom falls below 90 per cent, though the courses are voluntary.

Worker awareness of costs contributes directly to savings, many firms have found. From the community relations standpoint, however, most significant is the fact that workers gain an understanding of the way business works and tell their friends what they know.

Economic education need not be confined to the classroom. For example, the Clevite Corp., Cleveland, provides each employee with a wallet-size card containing such company statistics as wages and salaries, sales, profits and dividends. The cards are highly popular and are frequently referred to in discussions with family and friends. A bar-stool argument over corporation wealth is quickly settled when the facts are at hand. Most important of all, the company makes it clear that it has nothing to hide from its employees.

—Steel, Vol. 133, No. 8

STABILIZED EMPLOYMENT AND THE G.A.W.: A SURVEY OF MANAGEMENT THINKING

LABOR's current drive for a guaranteed annual wage has thrown the whole problem of employment stabilization into high relief. To gather factual data on the extent of employment fluctuation within companies and on measures taken to regularize employment, the Bureau of National Affairs recently surveyed 158 representative personnel and industrial relations executives. Here are some of the survey highlights:

With respect to employment fluctuation, it was found that one-third of the larger companies surveyed and two-fifths of the smaller firms were subject to considerable annual fluctuation in employment. A breakdown of these replies on an industry basis shows that those industries in which production may depend largely on market conditions are subject to much greater fluctuation in employment than others. Thus, where demand for a product is seasonal—chemical fertilizers, for instance—stabilized production is possible only to the extent that storage is feasible. Similarly, the perishable nature of such products as beer, which undergoes a seasonal demand, highlights the difficulty of regularizing employment in food processing industries.

Almost all companies which find themselves subject to a considerable amount of employment fluctuation make some attempt to eliminate it. Among the measures designed for this end are product improvement and diversification; improved production scheduling, including such measures as modernizing plant and equipment, maintaining a backlog of work, and seeking subcontracting work; building up an inventory of finished goods

during slow periods; more efficient sales practices, including sales forecasting, closer coordination between sales and production departments, and offering discounts for purchases ahead of season; and such personnel measures as transferring employees from plant to plant, retraining to absorb rather than lay off, and hiring temporary workers. The two measures mentioned most frequently are introducing new products and building up product inventories during slow periods.

Personnel and industrial relations executives in over one-third of the larger companies, but in less than one-fourth of the smaller firms, expect the union drive for a guaranteed annual wage to make considerable headway in the next two years, and over 50 per cent of these also expect to be confronted with demands for GAW in their own companies. At the same time, the great majority who are not confronted by demands for GAW do not envisage much headway by this union drive. As these figures suggest, most personnel executives do not foresee any great success by the GAW drive in the near future.

The executives were asked whether, in their opinion, the prospect of GAW has induced management to take a "new look" at employment stabilization. Among executives who agree that management is doing this (roughly two-thirds of those answering this question), the attitude prevails that this is more or less desirable.

How do personnel executives feel about bringing the union into a joint study (partly as an educational device) on the feasibility of a wage or employment

guarantee? Replies to this query indicate that while executives in smaller companies are fairly evenly divided in their opinion on this matter, the great majority of executives in larger firms are opposed to such joint studies.

This opposition centers around two themes. First, a sizable group of respondents claim that management agreement to a study would be heralded as company approval of GAW. The second major objection is that joint studies represent an invasion of management functions. Several respondents also point out that a joint study might involve the international union rather than the local. Finally, a number of executives feel that it is inadvisable for the company to transmit confidential data to the union.

Prior to the actual demand by a union for a wage or employment guarantee, respondents envisage a great many concrete actions which personnel and industrial relations executives can take. For purposes of clarifying and emphasizing management's position on GAW among employees, the executives suggest the use of all the usual communications media: letters, house organs, bulletin boards, reading racks, employee meetings, and word-of-mouth. Other suggestions for meeting the union drive for GAW include distributing annual and quarterly stockholder reports to employees, taking a poll of employee opinion, instituting economic education programs, keeping top and middle management fully informed on all aspects of GAW, aiming for desirable legislation, putting pressure on union leadership, advertising by individual companies, and cooperation among all companies.

What kinds of data should a personnel-industrial relations department assemble in preparing to negotiate on a guaranteed annual wage? Recommendations of re-

spondents on this matter include details of GAW plans; estimated over-all costs of GAW; employment data, which would include figures on the extent of employment fluctuation in the past, layoffs, work schedules, training costs, wages, and fringes and benefits; production information, comprising figures on production records and production efficiency; inventory figures; sales records and the effect of GAW on sales; financial data on the business; and effects of GAW on unemployment compensation.

A variety of counterproposals on guaranteed wage and employment demands were suggested by the respondents. Among these are proposals to limit the number of employees covered (suggested more frequently than any other measure), relax seniority and sick-leave provisions, get more union collaboration, eliminate overtime pay, and lower wages to the prevailing level.

In addition to counter-offers on GAW, respondents also put forward a number of suggestions to be offered in place of GAW. Modified seniority provisions to give greater security to senior employees, improved fringe benefits, and profit-sharing are but some of these.

The crux of the whole guaranteed wage and employment issue is bound up in one question: Is GAW practical? In overwhelming numbers, the executives surveyed maintain that it is not. Most believed that the added cost factors would affect all aspects of an enterprise, leading to problems in production, personnel, and sales. With respect to production, the most serious difficulties would be scheduling problems and curtailed volume. In personnel, problems would arise in the form of lowered morale, a static work force, lack of flexibility, and a slowdown in production. Among the sales difficul-

ties predicted were loss of business and an upset price structure.

A recurring theme in the statements of the executives is that *guaranteed sales* are a prime prerequisite to guaranteed wages or employment. In the words of one: "In view of fluctuating sales a guar-

anteed annual wage is hardly feasible. We could of course stabilize employment by manufacturing for inventory, but this is enormously costly. It appears to me that a guaranteed annual wage is not a possibility in this industry unless someone discovers 'guaranteed annual sales.' "

—*Employment Stabilization: Personnel Policies Forum, No. 24*
(The Bureau of National Affairs, Inc.)

Guaranteed Annual Wage for Older Workers Only?

IF A COMPANY feels it can or must make an offer on the guaranteed annual wage issue, it might consider a guarantee for those over a certain age only, an attorney with wide experience on the management side of the bargaining table suggests. Weldon P. Monson, of the firm of Meleney, Monson & Dick, New York, made these points recently before the Industrial Relations Association of Buffalo:

Workers who are in their '50's, but still far from pension age, are hardest hit by the closing down of a plant or a permanent layoff. Even though many of them are among the most highly skilled of the work force, other employers may be unwilling to hire them. And in many cases private pension plans have intensified this difficulty.

"Seniority—rather than age—is the usual basis on which workers are included or excluded from the group covered by the guarantee, of course. While it may be difficult for labor—"which becomes quite ponderous in both its thinking and movements at times"—to agree to draw distinctions because of age, the plan still provides the answer to a particular problem, said Mr. Monson.

Whether or not the company is prepared to make concessions on the GAW, Mr. Monson believes it should come to the bargaining table armed with facts and figures. These, he suggested, should include charts and graphs extending over a period of perhaps 15 years, showing: *Employee turnover*, including layoffs due to lack of work; *production trends*; *sales* by both unit and dollar volume; *inventories*; *peacetime* (as distinguished from wartime) *production*; *wage and salary costs* per week, per month, and per year, and ratio such costs bear to the gross sales dollar; and *hidden costs* of fringe items and "off the job" practices, with specific reasons why unemployment compensation has been obtained.

—*Industrial Relations News* (Industrial Relations Newsletter, Inc., 230 West 41 Street, New York 36, N. Y.) 4/26/54

HOW TO DEFEAT COMMUNISM: In Venice, Italy, a team of visiting American business men stopped to hear the troubles of a motorcycle manufacturer. They looked his plant over; gave him some ideas from their own successful operations in the United States. As a result of their assistance and advice, the Ceccato motorcycle plant has increased production 70 per cent in the past year-and-a-half; has boosted the basic wage by 30 per cent; has increased employment by 27 per cent; and reduced its prices by 17 per cent. Inspired by this living example of democracy in action, more than 25 per cent of the Ceccato employees have left their Communist-dominated union and signed up with a free trade union.

—FRANK EDWARDS in *AFL News-Reporter* 5/4/54

No Job Problem for June Graduates

THIS JUNE'S CROP of college graduates is getting plenty of job offers from industry, according to a survey of job placements by 128 universities and colleges throughout the country.

Results of the survey, conducted by the Family Economics Bureau of the Northwestern National Life Insurance Company, show an employment demand equal to or slightly better than a year ago, at salaries averaging a little higher than last year's record high.

Of 47 engineering colleges and technical schools surveyed, 32 said all or nearly all of their graduates not facing military service will be placed by commencement time, and nine estimated 90 per cent placement by then. All forecast full placement by autumn.

Of the 81 non-technical schools, 28 expect 90 per cent placement or better by commencement time, and 71 figure that between 90 and 100 per cent will have jobs by October.

Starting salaries generally are up \$10 to \$25 a month over last spring, with liberal arts men beginning at \$290 to \$340; business administration majors at \$310 to \$360; accountants at \$300 to \$385; and engineers at \$350 to \$400.

Many college placement officials reported that employers are more selective this year, making for sharper competition for the services of upper-level graduates.

—*Journal of Commerce* 5/24/54

Company Vacation Policies, 1954

DESPITE hot and cold war, overtime pay, moonlighting, and several other things, including fringe-benefit costs, this nation has steadily been moving in the direction of more leisure time for more people, not excluding manufacturing employees.

This year, the typical manufacturing worker is headed for the longest vacation yet, to judge from the findings of a recent survey in the Cleveland area, which is considered generally representative of U. S. industry as a whole. The survey, conducted by the Associated Industries of Cleveland, covered 324 companies employing 115,620 men and women and giving vacations under more than 175 escalator arrangements. Here are some of the detailed findings:

This year 129 companies employing 92,878 workers will give 15 days' vacation after 15 years' work, as against 97 companies employing 81,881 a year ago. In 1950, only 20 companies gave 15 days' vacation to 15-year employees.

Last year 146 companies gave 10 days' vacation after five years; this year, 197 companies will do so.

During the war in Korea, and the period of controls which accompanied it, the escalator vacation program became standard practice. Most commonly, under this type of arrangement an employee with six months' service gets three days' vacation; after one year, he receives five days; after two years, six days; after three years, seven days; after four years, eight days; and after five years, 10 days.

A majority (218 firms) of AIC member companies pay the employee his straight hourly rate during his vacation. As a rule, employees must be on the payroll as of a certain date in order to be eligible for paid vacation time.

Plant vacation periods are becoming more popular. This summer, 67 Cleveland companies employing 8,363 people will close for one week, and 114 companies employing 71,588 will close for two weeks for simultaneous employee vacations, while 110 will stagger their vacation program.

—*For the Informed Executive* (Associated Industries of Cleveland) 5/1/54

SEVEN ROADBLOCKS TO EFFECTIVE TRAINING

How effective are industrial training programs? An analysis of the problems, frustrations, and desires revealed by training directors shows seven major weaknesses in industrial training, some stemming from management policies, others from actions on the part of training directors themselves.

1. *The training director is subjected to pressures both from within and without the company, so that he often overlooks certain fundamentals of learning.* So long as training involves the mental processes of the trainees, the basic established factors of the psychology of learning must apply. Training cannot be done overnight, despite the pressure of management for immediate results, the general reluctance or resistance of the trainee to prolonged study, and the desire of the trainer to get the job done. Quick and concentrated programs seem logical on paper. But mental indigestion can have the same results as physical indigestion.

2. *There is a general tendency to "spoon-feed."* All the trainee has to do is appear at a certain time and place together with a group of other trainees. Then the training director, or someone under his guidance, starts the ball rolling. He may pass out information on what to do or not to do. He might present a case or a problem and ask, "What do you fellows think?" He might show a movie or film strip, and follow it with a discussion. No advance preparation is required on the part of the trainee.

Though there is much merit to this so-called "conference method" of training, we must also recognize its dangers. Here is how three different training directors have expressed it: "All too often the conference method can be merely an ex-

change of ignorances." "The trainee must put in some of his own sweat to get anything worthwhile out of the program." "The conference method is much like pouring a pitcher of water over the trainee's head and hoping that some of the water soaks in."

3. *A broad basic program is passed over in favor of a short, specific one.* All too often the attention of the training director stops with the appearance of a need and with setting up a program to correct it. Instead, it might have been better to search deeper to find out why that need arose in the first place. For example, there may be a need for better letter-writing, better report-writing, better verbal or written communication. What is basic to these specifics? A possible answer might be: effective English usage—grammar or techniques of clear expression.

Where it is at all possible, a solution to the problem might be to operate two parallel programs: a short one to take care of immediate training needs, and a long-term one designed to cut these needs down by getting at their causes.

4. *The training director often misuses training aids.* There is every reason why visual aids, flip charts, and other tried-and-tested teaching techniques should be utilized. The difficulty is that training people often think that these training aids are the whole program. Aids to instruction are no more than aids. Knowing when, where, and how to use them is not a technique to be mastered in one easy lesson.

5. *All too often the wrong people get the training.* Generally this is the fault of management, as expressed through its training policy. If management desires

that all supervisors be trained, then all supervisors are enrolled in the program. The training director makes the course attractive in order to "sell" it. He tries to avoid putting too much pressure upon the mental activity of the supervisor, and he more or less spoon-feeds. No wonder training directors get tired of "leading a horse to water," only to find that they can't make him drink.

6. *Top management itself does not participate in training.* To appear at the beginning and at the end of the program is, in many instances, all that management will do. But how can it really know how a program is going over unless it is willing to participate actively throughout the program?

—GEORGE M. DAVEY. *Factory Management*

7. *Management frequently takes a short-sighted view of its training policies, with the result that the over-all effectiveness of its training department is handicapped.* There is a constant battle for company time between requirements of training and production schedules. Consequently, training is confined within the narrow limits of direct application to company benefits.

Where possible, some of the characteristics of an apprentice program should be adapted to all forms of industrial training. Training directors would then be in a position to do a better job, and the entire industrial training program might show more lasting benefits.

and Maintenance, March, 1954, p. 234:7.

EMPLOYEE MOVING ALLOWANCES: A SURVEY

HARRY PRICE

Office Manager

The American Jewish Committee, New York

WHAT MOVING ALLOWANCES should be granted to employees when relocating from one city to another at an employer's request? Many firms, including ours—which is a national social organization working for better community relations—face this problem from time to time.

Recently we undertook a limited survey to check the practices of other national firms and organizations, so as to have a basis for establishing a formal and fair moving-allowance policy and procedure. Our findings were informative, but it was also significant to note the high degree of cooperation and interest expressed by the recipients of our question-

naire, as evidenced by their large percentage of reply.

Our questionnaire regarding the permanent inter-city relocation of employees was mailed to 33 nationally known concerns. Roughly one-half of these were business firms; the remainder were non-profit organizations.

From the 33 concerns questioned, 24 replies were received, of which about half were from social organizations. The rest came from manufacturers, a bank, a government agency, a department store, a railroad, a trade union, a business association, a hotel chain, etc. Of the 24 replies received, 14 were complete or reasonably complete. Five more respondents

reported that they had no significant moving problem. Partial replies were received from the remaining five respondents.

The replies generally indicated no written policy or procedure with regard to employee relocation, except that a federal agency referred to several executive orders, and one social organization sent an excerpt from their union contract as illustrative of their policy. However, the detail of the replies demonstrated a working policy, even if informal.

As to expenses allowed for moving employees, all respondents replied that they pay employees' moving, packing, and insurance expenses in whole or in part. In some cases, the expenses that will be paid are limited to a "reasonable" amount. One firm grants a TV installation allowance to a maximum of \$30.00. Three firms grant gratuities allowances. One organization grants living expenses upon arrival at a new location at a rate of \$10.00 per day for a maximum of two weeks.

Regarding the travel expenses of employees' families, only two respondents, a trade union and a social organization, do not pay for such expenses.

There is generally no difference in allowances between new and old employees. However, two manufacturers and the Federal Government require new employees to pay part or all of their expenses to their first duty post.

The majority of respondents grant allowances for temporary housing or storage charges. These range from as little as three days to as long as three months, or for "reasonable" periods. The amount varies from actual "cost" to as much as "field service travel" rates. Several respondents stressed that the individual circumstances of each case are important in determining these allowances.

On the question of appliance installation or other "moving-in" expenses, five respondents, including three manufacturers and two insurance companies, stated definitely that they do grant such allowances; the majority, however, do not.

A unanimous "no" was the reply to a question on the granting of allowances for higher rents.

All but three respondents leave moving arrangements up to the employee. In one of the three cases this was optional as between employee and firm; in the other two the firm handles the moving arrangements. One of the respondents has designated one van company for all their employees' moves.

The limited scope of our inquiry makes broad generalization unwise. However, it has been useful to learn what practices are followed by some of the managements that face these problems from time to time.

A NEW SURVEY of engineering incomes by the Engineers Joint Council, covering about 72,000 engineers employed in industry, government, and engineering education, shows that median incomes for total industry groups range from \$4,284 for 1952 graduates to \$9,399 for those who entered the profession in 1915-19. The median for those out of school 10-14 years is \$6,593. Starting salaries this year for engineering graduates are up slightly from a year ago; January graduates at the Illinois Institute of Technology averaged \$373 monthly. Chemical engineers topped the list with \$394; next came civil engineers with \$388, mechanical engineers with \$370, and electrical engineers with \$367. The only drop from January 1953 was in salaries for industrial engineers—down \$6 to \$350.

—*Industrial Relations News* (Industrial Relations Newsletter, Inc., 230 West 41 Street, New York 36, N. Y.) 5/3/54

Straightening Out Probation Kinks

IT HAPPENS all the time. A new employee is hired, placed on probation, kept on beyond the probationary period—and then his supervisor decides he didn't make the grade after all. So he is let out.

Inevitably, if there is a union, a grievance is filed, and the company has to go through the whole rigmarole of proving incompetence. Had the firing taken place before the worker came into his rights as a regular employee there would have been no such trouble.

The problem arises from two causes: (1) the supervisor cannot make up his mind in time; (2) the supervisor forgets when the probationary period is up. The remedy lies in the establishment of smooth procedures.

For example, at the Homelite Company (Port Chester, N. Y.) the personnel department maintains a tickler file of all probationary workers. A week before the trial employee's time is up, a reminder is sent to the supervisor.

Yale and Towne (Stamford, Conn.) has a more elaborate system. A member of the personnel department, the foreman, and the new worker meet a week or two before his probation period is up. This gives both the foreman and personnel an opportunity to get the worker's reactions to his job, his environment, his problems. It also boosts the worker's morale to see that his immediate boss and the personnel department are interested in him.

After the meeting the foreman and the personnel man fill out a joint "New Employee Follow-Up Interview" form, covering such matters as job instruction, working conditions, job satisfaction, wage satisfaction, social adjustment, orientation on working conditions, and appraisals of the worker by his supervisor and by the industrial relations department. Thus, when a decision is made that a newcomer be kept on, it is no haphazard matter.

—*Employee Relations Bulletin* (National Foremen's Institute, Inc.) No. 405

Company Size—A Factor in Absenteeism?

WORKERS TEND TO BE absent more often in large concerns than in small, according to *Size and Morale*, a pamphlet published by The Action Society Trust, London. Labeled as "a preliminary study," the publication gives results of investigations made in the British coal industry, in a large private industry, and in a large retail organization having 230 stores throughout Britain.

The trend is said to be particularly noticeable in the nationalized coal industry, fairly well marked in private industry, and just discernible in the commercial undertakings investigated. Also, no correlation was observed between punctuality, or even absence, with distance traveled by workers from home to place of work.

The study is presented with the careful reservation that size, while important, is not the final determinant; there are many small firms whose lost-time figures are proportionately much higher than those of large firms undertaking similar work.

To provide a valid explanation of the findings, the pamphlet points out, would require extensive further research. To conclude that the size of a unit "influences" absenteeism would be "only an empirical observation: it is not an explanation."

—*Information Service* (National Council of Churches of Christ in the U. S. A.) 3/15/54

BIRTHDAY BONANZA: In Hillside, N. J., General Brass and Machine Works, Inc. signed a contract with the United Electrical, Radio and Machine Workers giving each of the company's 200 employees a day off on his birthday.

—*Time*

Also Recommended • • •

UNION POLITICAL ACTION: THE MEMBER SPEAKS.

By Ruth Alice Hudson and Hjalmar Rosen. *Industrial and Labor Relations Review* (New York State School of Industrial and Labor Relations, Cornell University, Ithaca, New York), April, 1954. \$1.50. Union attempts to influence the voting decisions of their members and the effects of unions on the political beliefs and actions of their members are leading issues today. Reporting the results of research into the attitudes of members of a large Midwestern union on these questions, the authors find that the conflict of opinion as to the propriety and effectiveness of union political action is as marked among rank-and-file union members as among persons outside the labor movement.

ABC'S OF GUARANTEED WAGES.

By Alfred G. Larke. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N. Y.), March, 1954. 75 cents. Union pronouncements on the guaranteed annual wage, industry's objections, and sources of further facts about the issue are outlined here. The arguments thus far, the article says, have involved large, nation-wide or industry-wide applications; debates on how a specific plan would work in a specific company are due shortly.

FACT AND FICTION ABOUT SOUTHERN LABOR.

By Stefan H. Robock and John M. Peterson. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1954. \$2.00. Too much fiction and too few facts about the labor resources of the South have diverted the attention of many companies from possible plant expansion in the South, the authors believe. In summarizing the large body of recently available labor information on the South, they point out that labor advantages of operating in the South, as indicated by actual plant experience, are the abundant present and future labor supply, excellent trainability of workers, high productivity, low rates of turnover and absenteeism, good labor relations, and low labor costs.

HOW 10 COMPANIES KEEP EMPLOYEES COOL.

By Paul Eastman. *American Business* (4660 Ravenswood Avenue, Chicago 40, Ill.), May, 1954. 35 cents. Air-conditioning systems ranging in size from a \$10,000 installation for 60 employees to a \$2½-million system designed to cool a 36-story office building accommodating 7,500 workers are briefly de-

scribed in this article, which offers some interesting figures on installation and operation costs. For example, one company (Alcoa) found that the cost of a built-in air-conditioning system in its new office building amounted to about 17 per cent of the total cost of the building, while labor costs of installation were in the neighborhood of 5½ per cent.

UAW'S DROP-INS WOO PENSIONERS.

Business Week (330 West 42 Street, New York 36, N. Y.), April 17, 1954. 25 cents. Two recreation centers maintained by the United Auto Workers for its retired members serve a double purpose: giving the pensioners something to do and helping the union to keep a hold on the loyalty of its senior members—who retain their union voting rights after retirement. Observing that the number of such pensioners is due to increase rapidly in the next few years, this illustrated article comments on the significance of the UAW program as a means of developing an increasingly important "market" for labor philosophy.

THE CASE APPROACH TO INDUSTRIAL RELATIONS.

Monthly Labor Review (Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.), April, 1954. 55 cents. Presents, in highly condensed form, the highlights of two recent books on industrial relations which have been of more than usual interest. The first of these, *The Worker Speaks His Mind*, by Father Theodore V. Purcell, is a case study of the collective bargaining in the Swift & Company plant in Chicago. The second, *Labor-Management Relations in Illini City*, by Milton Derber, analyzes labor-management relations in a particular community, drawing upon case material from eight industrial establishments. Both summaries were prepared by the original authors.

APPRENTICES: ASSURANCE OF SKILLED LABOR TOMORROW.

Steel (Penton Building, Cleveland 13, Ohio), May 3, 1954. 50 cents. Industry is short at least 570,000 apprentices to maintain current skilled labor status, according to the Bureau of Labor Statistics. Management lethargy is largely to blame for this situation, this article asserts; apprentice programs are entirely feasible, as the experience of several forward-looking manufacturers has shown. The common fear of spending too much on apprentice programs is unfounded, in view of the fact that an apprentice begins to pay his own way in the third year.

Office Management

DON'T LET LETTERS SHRINK YOUR PROFITS!

MILLIONS OF DOLLARS in business will be lost this year, thousands of good customers and prospects will be antagonized, and many a company will be stuck with bad credit losses—all because management refuses to be realistic about daily correspondence.

In company after company, persons totally unfitted by temperament, personality, mentality, or training are being allowed to write letters that are driving business elsewhere, offsetting large sums being spent on advertising and promotion, and creating needless handicaps for the selling force to overcome.

These are a few of the common letter-writing weaknesses which exist in many concerns:

No Executive Participation. If officers, department heads, and managers do not write good letters themselves—and repeated tests have shown that a high percentage of them do not—those working under the managers will take little interest in developing their writing ability. Inexplicably, many people seem to feel that once they reach the management level they automatically become immune to poor letter-writing habits.

The first step in improving your company's correspondence is to start at the top. Make sure that your entire management is letter-conscious—and that each member of management is able to write good letters himself.

Inadequate Training. Letter writers must be trained to think clearly and logically, to analyze situations properly,

and to use good judgment and tact. Furthermore, they must be taught what makes their readers tick and how to favorably impress and influence others in order to get the desired results.

You cannot expect your staff to develop these traits in "six easy lessons." If you want your people to derive all the benefits that can be obtained from a letter-writing program, make it a continuing affair. Furthermore, if you want to do a thorough job and hold your staff's interest, your correspondence program should be well-rounded. If you use printed instructions, make sure they will help letter writers with specific day-to-day problems.

Everyone likes to participate in a project where he has a chance to voice an opinion. That is one of the great benefits to be derived from letter-writing clinic sessions. Such sessions should be varied. For example, one can be employed to discuss the principles set forth in printed instructions or manuals, while another session can be used to analyze carbons of letters that have been written, letting each member voice his criticisms or approval. Keep the sessions short and fast-moving, and continually change the approach. It is wise to run tests occasionally to see how much of the program is being absorbed and followed.

Inadequate Experience. Another basic weakness in many correspondence programs is that instructors lack experience.

About a year ago the personnel man-

ager of a large insurance company was given the job of training the staff to write better letters. Not only was he totally unequipped for the assignment, but he could hardly keep up with his own work. Is it any wonder this firm's program collapsed within six months?

On the other hand, because many management men still think that all that is necessary to teach people to write more effectively is a course in grammar, punctuation, construction, and spelling, they often employ outside instructors totally unequipped to do an effective letter-writing training job. Obviously, anyone who is not well acquainted with modern business methods—who does not know how to handle the various sales, credit, adjustment, claims, and other situations that arise daily in the average office—is hardly fitted to teach others to write letters that will build good will.

It is important to remember that letter-

—RICHARD H. MORRIS. *Office Executive*, May, 1954, p. 53:3.

writing usually calls for more tact, imagination, analytical ability, and salesmanship than does face-to-face selling. A correspondent does not see the person to whom he is writing, and therefore has to foresee the effect his remarks will have on his reader. He cannot utilize his personality, smile, and manner the way a salesman can in overcoming objections or handling delicate situations.

Don't make the fatal mistake of trying to cut corners on your training program. In far too many cases, top management still looks upon daily correspondence as a relatively unimportant, inexpensive operation which anyone can handle. They seem to ignore the fact that about 85 per cent of their business is being conducted either wholly or partially by mail, and that the letter writers in their organizations can either mar their reputations and prestige, or reinforce their sales, advertising, and public relations efforts.

USE DUPLICATORS TO CUT COSTS

MORE AND MORE companies are turning to duplicating equipment as a way to beat the high cost of clerical work. When duplicating equipment is properly geared into the total operation, the benefits go beyond mere savings in clerical salaries to include better communications within the company, faster interchange of information between home office and decentralized or outside staff, and improved control over production.

Do you send frequent reports to employees outside the home office or publish price lists or other such data fairly often? Do you have a house organ? Could

duplication equipment be used to reproduce department progress charts, attendance records, or cost data? Companies have turned up some highly effective uses for duplicating equipment in the following operations:

Order and billing. In most companies, the order-billing operation involves six or more steps. Typing each form separately is costly and invites delays and mistakes. By placing all the required information upon a master and tailoring printed forms to pick up common information in the same place on each form,

the job can be done much more quickly and accurately.

Large mailings. A company that mailed regularly to a steadily changing list of approximately 3,000 names had been looking anxiously for a way to reduce its addressing costs. An almost forgotten duplicating machine supplied the answer. Masters were cut with 40 names and addresses on each, grouped chronologically so that all those on any one master became obsolete together. To prepare address labels, these masters were run on specially perforated gummed paper. As the sheet of labels came off the press, they could be separated and pasted on the waiting envelopes.

Fingertip controls: Statistical data charted on masters with preprinted graph-grids have a multitude of uses. Many companies use their equipment to issue daily reports on production, sales, new orders, etc., saving considerable time over manual preparation.

Different makes and models of duplicating equipment vary as to versatility, ease of operation, quality of copy, and maintenance cost. A more expensive machine, because it has a wide range of applications, may cost less over the long run than a cheaper, less versatile model.

Here is the up-to-date picture of the three main duplicating processes:

—*Operations Report* (Research Institute of America, Inc., 292 Madison Avenue, New York 17, N. Y.), Vol. 7, No. 5.

Spirit duplicating is a quick economical technique for frequent short-runs (1-500). Masters can be prepared in longhand or type, printing as many as 6 colors simultaneously. The old objection to spirit carbons—soiling of operators' hands and clothes—has been largely overcome by new type carbons with moisture-proof protective coatings. Since the spirit copies fade, however, they aren't desirable for records that face exposure or long storage.

Stencil duplication, an old and widely-known method, is used almost universally for house organs, bulletin board announcements, work order details, etc. Use of contact dry ink makes fine quality reproduction possible now. (Of course, the cost runs up, too—as much as \$1,000 for the best models.) An inexpensive device (mimeoscope) for incorporating artwork on a stencil also encourages use of these machines for publicity copy and house organs.

Lithography or offset process, because of its cost, is economical only where extremely long runs (30,000-70,000) or fine embossed work is required. Offset has the additional advantage of being able to reproduce pictures and copy simultaneously with photographic masters, so that you can turn out professional form letters, ads, and promotion releases.

A New Kind of Work-Study Program

THERE'S NOTHING NEW about clerical work-study programs. Usually, however, such a program is presented by a school to an industry.

Abbott Laboratories reversed this procedure and presented a work-study program for students of office occupations to the principals of the high schools. Under this plan seniors taking commercial courses have an opportunity to supplement classroom training with on-the-job training and experience.

This program was designed for high-school seniors taking secretarial subjects who did not plan to go to college and who would be available for permanent

employment after their graduation. Eleven girls from three high schools were selected for general clerical, clerk-typist, and stenographic work. The trainees were given an agreement—covering their obligations, the school's and the company's—which was signed by one parent of each trainee, the student, a representative of the school, and the coordinator of personnel for Abbott Laboratories.

Whenever possible, these workers were offered full-time employment (40 hours per week) during any vacation period. They were not permitted to work more than eight hours in any one day.

A training assignment and time schedule was prepared for each student, providing for both basic office experience and practice in the student's highest office skills. Every student was given an opportunity to work in two different departments during one semester, a provision which the trainees consider one of the outstanding features of the Abbott program.

Of the 11 girls who had started on the program, 9 are now full-time employees. Word-of-mouth advertising has brought several other June graduates in to apply for office jobs—almost a reverse of the situation that had existed a year earlier.

—*American Business*, Vol. 23, No. 12

Demand for White-Collar Jobs Outruns Supply, ILO Reports

WHILE opportunities for white-collar employment are increasing throughout the world, the demand for such jobs nevertheless is outrunning the supply, according to an International Labor Organization study just made public.

The study says that in many countries non-manual occupations are suffering serious unemployment, which is second only to that of unskilled manual workers. The report attributes this to various causes: (1) an unavoidable evolution toward the rationalization and mechanization of work, (2) an excessive flow of young persons to white-collar jobs, and (3) a lack of skills and adaptability in the white-collar labor force.

"People in white-collar occupations claim higher social status than wage earners," the ILO report notes. "This essentially non-economic factor is basic to employment problems persisting in these occupations, even though the shadowy line between many clerical tasks and unskilled factory occupations tends to become more and more imperceptible."

The report emphasizes that while white-collar employment has expanded much more rapidly than manual work in the past half century, this does not necessarily mean that there are unlimited employment opportunities in the white-collar field.

"There are contradictory factors and there are dangers in this evolution," the study comments. "The situation and outlook vary not only from country to country, but also geographically within the same country and even within the same occupation. Traditional attitudes, both of employers and job seekers, create and maintain unbalances in the supply of and demand for manpower. Generally speaking, the flow to white-collar occupations exceeds the rate of absorption. Surplus labor is found in otherwise prospering occupations owing to age barriers or sometimes to lack of the required skills."

To relieve unemployment among salaried workers, the report says, action is required on many fronts. "Basically," it suggests, "a better knowledge should be fostered among young people and their parents of occupations in all sectors of economic activity and of their requirements and prospects. This would facilitate a more rational occupational choice and overcome prejudices which at present induce too many youths to select non-manual jobs without sufficient guarantees of employment security or of promotion."

SHORT OF SECRETARIES? TRAIN YOUR OWN!

WHEN, in the spring of 1954, it became obvious that we at the Aluminum Company of America were losing secretaries faster than we could hire replacements, we decided to try training girls during the working day and to pay them while they were being trained.

Supervisors were asked to recommend girls whom they considered potential secretarial material. Reviewing the schooling and previous employment records of these girls, we selected for further consideration those who could type at least 20 words a minute and showed promise of developing the ability we sought.

The candidates were interviewed for the purpose of determining the suitability of their attitude, appearance, and personality. Only those displaying real enthusiasm for the training went on to take a rigorous battery of aptitude and achievement tests.*

Because of the small number involved in this testing experiment, no definite conclusions can be drawn. However, the tendency was for those with the highest scores in stenographic aptitude and dexterity to do best in stenography and typing.

Only six girls met the rigid specifications that were set: five employees and one not previously employed by the company.

* In addition to the SRA Clerical Aptitude Test, the Otis Self-Administering Test of Mental Ability, and a grammar test, which are given all female clerical applicants, the girls considered for secretarial training took the following test battery: Bennett's Stenographic Aptitude Test; the General Clerical Test; Purdue Pegboard; Minnesota Rate of Manipulation; Iowa Reading; The Personal Audit; Bernreuter's Personality Inventory; Kuder Vocational Interest.

The trainees were warned that the course would entail a considerable amount of outside work and would be suitable only for those with few responsibilities at home. The girls were impressed with the fact that in fairness to the company, they should not start the training unless they planned to work for at least two years after the completion of their course.

For four months, from 8:00 a.m. until noon, classes were taught five days a week in typing, shorthand, transcription, English grammar, grooming, and etiquette.

Since the girls had already had a basic course in typing, their typing class, which was divided into two periods of 45 minutes each, consisted primarily of drill and speed building. Typing to music proved to be a valuable aid in developing accuracy and speed.

The trainees were not required to know any shorthand before they entered the training course; but they were warned that, in order to acquire a working knowledge in a short time, they must be prepared to spend from one to three hours each evening on homework. After the trainees had progressed in shorthand to the point of taking dictation, one class period each day was devoted to transcribing letters.

Basic English grammar was reviewed for one hour three times a week, and some of the fine points of usage and sentence structure were studied. This class also included intensive work in spelling and the techniques of letter writing: vocabulary, style, clarity of expression.

Probably the most valuable class was the etiquette potpourri held twice a week,

for it helped develop desirable attitudes. Members of top management were frequently invited to speak informally to the girls on their ideas of the "perfect secretary." Movies concerning hygiene, cosmetics, posture, the history of the company, and other diversified subjects were included during this period. Several class periods were devoted to correct telephone practices, filing, proper office dress, and introductions.

During training the girls were assigned for three-week periods to various offices throughout the plant, where they worked in the afternoons. In this way they gained first-hand knowledge of the activities of different offices, and learned many practical lessons that could not be included in classroom work.

Each week the supervisor in whose office the trainee worked during the afternoons was asked to rate the trainee. This rating sheet was used as a basis for a weekly private conference between the trainee and her instructor.

By the end of the four-month training period, the girls were typing from 40 to 50 words per minute. They could

take dictation at speeds varying from 60 to 90 words per minute, depending on the difficulty of the material.

At the end of the course, management arranged a dinner to celebrate the occasion. This event and all the activities of the course were recorded in a 10-minute non-professional movie in color and sound (which Alcoa will make available upon request to industrial firms and educational institutions).

As openings for stenographers occurred within the plant, the girls were assigned to these positions. Some of them started training on permanent jobs during the afternoons before the four-month training period was over. Others were assigned to offices at the end of the training.

Already we have indications that this secretarial training course has been successful. The girls themselves feel that they have profited from their training, and this is reflected in their poise and self-confidence. Moreover, supervisors in whose offices the girls have been placed have commented favorably on the results of their training.

—ANNETTE R. PLANTE, *Personnel Journal*, May, 1954, p. 21:3.

Useful Data on Office Machines

THERE'S A MACHINE to do nearly every office job except sit on the boss's knee, according to a recent publication of the University of Illinois Bureau of Business Management.*

Summarizing information on modern office machines—what they are, what they do, when their use is economical, and who makes them—the booklet considers punched card machines, accounting machines, adding and calculating machines, typewriters, addressing machines, dictating machines, folding and inserting machines, postage meters, and so on down to letter openers and time stamps. An appendix lists addresses of manufacturers of office machines.

Use of machines for routine clerical jobs is by no means restricted to large offices, the author observes, pointing out that besides providing management with more detailed and more accurate data, the use of machines leaves clerks free for other activities.

* *Brief Review of Modern Office Machines.* By Robert L. Peterson. Business Management Aids, No. 8. Single copies available gratis from Business Management Service, University of Illinois, Urbana, Ill.

Testing Clerical Applicants—A Survey

WHAT TYPES of test are most commonly used in screening applicants for white-collar positions? A recent survey conducted among member companies by the Fort Worth chapter of the National Office Management Association revealed that 54 per cent of the respondent firms regularly test applicants for clerical jobs. Written tests alone are given in 89 per cent of these companies; in 11 per cent, tests are both written and oral.

Eighty per cent of the companies use professionally prepared tests, and 53 per cent use tests prepared within the company; therefore, some companies use both types. Applicants are tested for general aptitude in 75 per cent of companies using tests. Fifty per cent of the firms test for intelligence, 25 per cent use personality inventories, 60 per cent test for clerical aptitude, and 25 per cent for mechanical aptitude.

Eighty-three per cent give tests to all applicants. Job applicants are placed according to the test results in 77 per cent of the companies, but only 40 per cent use the tests as a basis for starting salaries. All companies find their tests satisfactory.

—Office Executive 4/54



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Also Recommended • • •

HOW TO PLAN RECORDS MANAGEMENT. By Robert E. Weil. *Office Executive* (132 West Cheltenham Avenue, Philadelphia 44, Penna.), May, 1954. 50 cents. Thorough analysis of all current records systems and practices is a prerequisite to the development of a truly efficient records management program in any organization, the author observes. This article maps out the territory to be covered in such a survey, and offers a number of suggestions for gaining top management support for the new program. Proper placement of the records management function in the organization, he believes, is an important prerequisite to success.

ELECTRONICS DOWN TO EARTH. By John A. Higgins and Joseph S. Glickauf. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1954. \$2.00. This year will see at least one and possibly several installations of large-scale digital computers for accounting and business operations. The authors discuss the significance of this new development, the characteristics distinguishing this type of equipment from all prior forms of mechanization, and the benefits it can provide.

IMPROVING PRODUCTIVITY AND REDUCING CLERICAL COSTS. By Robert S. Hall. *Retail Control* (National Retail Dry Goods Association, 100 West 31 Street, New York 1, N. Y.), January, 1954. 75 cents. An over-all review of the progress management has made in improving office productivity and reducing costs by applying industrial engineering practices to clerical operations. The author discusses some of the basic steps involved in office methods improvement and cost control and also points out some of the mistakes companies commonly make in the course of getting their office production problems ironed out.

COMPANY PUTS ROUTINE OFFICE JOBS ON MACHINES TO CUT COSTS. By Wells Norris. *American Business* (4660 Ravenswood Avenue, Chicago 40, Ill.), May, 1954. 35 cents. Work simplification studies, frequently resulting in the modification of standard office

equipment, have brought about increased clerical production and sizable savings at A. C. Nielsen Company. Typical of the successful projects described in this article is the case of eight employees who were enabled to double their production by the transfer of part of their work to tabulating machines, while related procedural changes reduced the net workload of that department.

THE RUMOR VIRUS. *The Office* (270 Madison Avenue, New York 16, N. Y.), February, 1954. 25 cents. How and why gossip circulates—and the subjects with which it is frequently concerned—are discussed here, with a list of five steps the individual or company can take to quash rumors. For management, the primary rule is, "Let your employees know all about your plans—avoid secrecy," the article says.

OPEN YOUR EYES TO THEFT. By George A. Conner. *Office Executive* (132 West Cheltenham Avenue, Philadelphia 44, Penna.), April, 1954. 50 cents. A five-point system of internal control to prevent employees from embezzling funds and to discourage other forms of dishonesty is outlined here. Suggesting ways to check work assignments and control cash receipts, cash disbursements, and merchandise, the author cautions employers never to take anything for granted.

INCENTIVE PAY INCREASED OFFICE PRODUCTION FROM 30% TO 50%. By John W. Keller. *The Office* (270 Madison Avenue, New York 16, N. Y.), March, 1954. 25 cents. Describes one company's experience in setting up production schedules for its clerks, typists, and dictation transcribers. The success of the program, in which salary increases are related to individual output, leads the author to recommend this plan unqualifiedly. He points out, however, that any firm considering the introduction of an incentive pay plan such as this must first make an extensive study which would include past records of performance, job analysis, and time and motion study.

PRIVATE CALLS: Of the companies replying in a recent survey conducted by the National Office Management Association, 88 per cent put no restriction on incoming personal telephone calls for clerical workers. In 77 per cent of the firms, office workers may make personal calls whenever they wish.

Manufacturing Management

NEW HORIZONS IN TRAFFIC MANAGEMENT

JOHN A. WALLACE

Director of Traffic

Ford Motor Company

HISTORICALLY, the primary function of the traffic department has been to control the transportation of raw materials, supplies, and products in and out of the factory. In recent years, however, company managements have become increasingly aware of the fact that an alert traffic department does much more for an industrial organization than merely arrange for the movement of its freight.

For example, long before freight begins to flow, the traffic manager is hard at work assisting management in selecting an ideal plant site. He must determine, by careful study of the existing or potential rate structure, the optimum balance between the inbound transportation cost of the raw material and the cost of moving the usually higher-rated finished product to the consumer. He must point out to his management where the freight advantages of greater proximity to the market begin to be overbalanced by the increased cost of moving farther from their raw material source. Proper and astute determination of this ideal compromise can mean the difference between success and failure in the plant's future operations.

To assure the maximum effectiveness of the purchasing department, the traffic manager must cooperate closely with the purchasing agent. For the past dozen years and until recently, raw materials

were obtained with extreme difficulty, and purchasing departments usually considered themselves fortunate in getting materials from any source. Today, both Traffic and Purchasing must jointly and conscientiously examine the transportation expense involved in everything purchased. When the purchasing agent is considering price quotations on a product submitted by two or more sources of supply, the traffic manager can furnish him with the respective freight costs so that he can determine which quotation actually reflects the lowest laid-down price. By working closely with Purchasing, the traffic manager, for his part, will receive advance knowledge of contemplated large-volume purchases of materials. With this information, he can ask the carriers for reduced commodity freight rates.

After the purchase order has been made out but before it is mailed to the supplier, a traffic routing clerk should scrutinize it and indicate the most economical and dependable routing. This insertion then becomes a part of the purchase contract, and should the shipper ignore these instructions and use a costlier mode of transportation without good cause, the excess expense may be charged back to him. By exercising complete control of the routing of incoming materials, the traffic department has full knowledge of

From an address before the First Michigan Industrial Traffic Conference.

the location of the shipment in transit. Should Purchasing or Production Control desire to reassign it to another destination or expedite its delivery, this can be accomplished very readily.

The traffic department can also be of considerable assistance to the sales and advertising departments. Since sales success depends, to a large extent, on the traffic department's ability to deliver the finished products at a laid-down cost equal to or less than that of its competitors, the traffic department must carefully select the most economical media of transportation. Consolidating shipments consigned to a number of customers in the same area into pool cars or pool trucks at a freight saving, taking advantage of stop-off arrangements and the lower volume rates applicable, and petitioning the carriers for establishment of reduced rates where justified by volume tonnage are only a few of the ways in which costs can be cut.

Freight rate studies compiled by Traffic on a prospective territory should be a deciding factor in apportioning the efforts of the sales office and in furnishing up-to-date information on competitors' freight rates to the same markets. These studies can also be helpful in determining where the firm's products can compete to the best advantage and, consequently, where the advertising dollar can best be spent.

Another very important traffic function is the supervision of the classification of freight for transportation. Since freight rates are based upon the classification assigned to the articles shipped, and since shipping costs are dependent upon rates paid, the proper classification of all freight emerges as one of the most important functions of the traffic department. In metal automobile parts, for example, the

metallurgical alloy content controls the freight rate applicable in transportation. It would therefore be important for Traffic to know that those parts composed of brass or aluminum take a higher rate of freight than those of iron or steel.

The filing and collection of claims against carriers for loss and damage of merchandise in shipment is a final function of the traffic department. An impressive record of claim collections is of no particular credit to a company, since the loss of customer good will as a result of damage to shipments in transit cannot be restored by making good these losses. At Ford Motor Company, Claim Agent Associations of both railroads and motor carriers are periodically invited to visit our plants and inspect our packaging, loading, and bracing methods. Traffic, Material Handling Engineering, and Production continually work together to improve containerizing, labeling and packaging of materials, and the loading and bracing of freight cars, and, as a result, claims have been reduced significantly.

In our company there is an operating traffic manager in every manufacturing plant. Even if the traffic manager has only two other people in his section, he is on the same organizational level as the controller, the plant engineer, the production control manager, and the manager of purchasing. He attends all management conferences, takes part in all top-level meetings, and is in a position to lend his advice and counsel in the day-to-day operations of his plant.

If a company fails to utilize fully its traffic manager and his staff, a wiser competitor will have a distinct advantage. And if the traffic manager has not yet shown his management the service and counsel he can provide, he has before him a major challenge.

WAGE INCENTIVES AND PRODUCTIVITY: ONE COMPANY'S EXPERIENCE

STARTING IN 1945 with the milling department, incentive coverage at the Jones & Lamson Machine Company (Springfield, Vt.) has been extended to cover all hourly-paid and salaried employees in our company. We now have an incentive plan for everyone, and coverage is 90 per cent—more, probably, than in any other plant except those with an over-all bonus type of incentive.

It seems impossible to find any one index that gives the whole story of the changes in productivity that have resulted. However, we have approached the problem from a number of angles:

Performance of Operators. Our standards are set in terms of a 60 performance—i.e., 60 minutes of standard work produced in an hour. Just prior to the installation of the incentive plan a survey showed that the average performance on direct work was about 37. All direct workers are currently averaging about 70.

Hours Required to Produce a Unit. Actual hours of labor going into several of the basic units we manufacture have been reduced by 27 per cent since installation of incentives. This reduction includes both direct and indirect hours.

Hours Required to Produce \$100 of Sales. If we adjust shipping dollars to compensate for price changes, we find that the hours required to produce \$100 of shipments were 25 per cent less in the years 1948 through 1952 than they were in 1942 to 1946.

It is important to note that while our company was showing an increase of over 25 per cent in productivity, the machine industry as a whole was reporting no significant improvement.

Of course, costs involved in the installation and operation of the incentive plan offset some of the savings. The cost of consultants hired, time-study men working, and incentive premiums paid amounted to about 30 per cent of the savings realized. In the future, this should be less, for there will be fewer new applications than in the past.

In addition to the gains in improved efficiency, our employees have increased their take-home pay about 30 per cent. This, in turn, has placed us in an advantageous hiring position.

It was noted that an increase in the speed with which people work when incentives are applied is not a major factor in the results obtained. In our case we noted that even though the average operator's performance prior to the incentive plan was only 37, the men were actually rated at over 60 *when they were working*. It was the wasted time that pulled them down.

When a man starts on incentive, we tell him that he should be working against his time job only when he is actually performing work covered by the standard for the job. When he encounters a non-standard condition, he is expected to charge his time to the code set up for that condition. The time clerk keeps a record for each man of jobs he runs and the time he spends on those jobs or on non-standard work. Codes have been established for such items as waiting, tooling delays, salvage work, trucking, and cleaning up. Each of these codes is broken down into several categories.

The workers are, of course, interested in "punching out" when they encounter

non-standard conditions. The proper charge is assured, as they must obtain the foreman's approval. This segregation of costs had been in effect prior to incentive application, but there had been no real urge to separate the direct work from the indirect.

We found some places where men were often waiting to get their work inspected. Men were losing time because work storage was poor and they couldn't find the next job. They lost time because the foreman didn't line up the jobs ahead. They complained that the tool-crib service was slow. Yet this was not a backward, run-down shop. Our company was a leader in installing good equipment, and we had been working for several years on a measured day-work system.

Having operators interested in properly reporting delays which prevented them from doing standard work, and having this lost time reported by departments and in total, gave us a clear picture of our costs. By studies of the problems involved and by application of incentives to the work of service departments, hours in these departments have been reduced in a ratio comparable to the reduction in direct hours. Manufacturing delays

have been reduced. Operators in an average machining department now stay on standard work 85 per cent of the time.

Reducing indirect work proportionately to a fall in direct hours is particularly difficult. With the indirect workers covered by incentives, the places where the workload is low show up at once.

In summary, our experience indicates that incentives which are properly set and maintained can result in a considerable increase in productivity. We do not believe that these gains can be achieved by the use of a measured day-work plan, or by an intensive methods-improvement program. It is only when the incentive ingredient is added that these programs take on real vitality.

This increase is not primarily from effect on the people who are covered by incentive, but from improvements which are brought about in all parts of the company operation.

Most so-called incentive problems are questions that would come up whether there was an incentive plan or not. The incentive plan brings them out and forces someone to answer them. It provides a driving force inside the organization that works for continual improvement.

—ROBERT S. JONES. *American Machinist*, May 24, 1954, p. 118:4.

The Cost of Accidents: \$9 Billion a Year

ACCIDENTS of all types claimed 95,000 lives and injured 9 million persons in 1953, according to the National Safety Council. The resulting economic loss, covering both fatal and non-fatal accidents, was \$9.1 billion, the Council estimates.

The Council noted that while the 1953 accident death toll was 1,000 below the 1952 total, it was still more than three times as great as the toll of American dead during the entire Korean War.

The motor vehicle held its place as the No. 1 accident killer. Traffic deaths numbered 38,300—a gain of 1 per cent over 1952. This total was the third largest in history, exceeded only in 1937 and 1941. Traffic accidents resulted in over 1.3 million non-fatal injuries.

Accidental deaths at work were unchanged at 15,000. Fatalities in home accidents numbered 28,000, a decline of 1,000.

Per-Capita Use of Basic Materials Soars

AMERICANS are so used to big figures—millions of tons, billions of dollars—that they don't make much of an impression any more. Besides, when figures get that big they become cold statistics and lose most of their meaning for the ordinary human being. So sometimes it's helpful to express them in alternate ways that make their real significance clear.

Putting large statistics on a per-capita basis is one way to make them make sense. It's a good way to measure, too. For example, showing production and consumption figures on a per-capita basis often gives a better picture of real economic gains and changing patterns than do straight production figures.

The table below shows growth in per-capita consumption of a number of basic materials—excluding fuels—between 1939 and 1953. Practically all products show some growth during the period, reflecting the great expansion that took place throughout the economy. (Industrial production on a per-capita basis increased by about 78 per cent.) But basic chemicals generally show the fastest growth rates in consumption per capita.

PERCENTAGE INCREASE IN PER-CAPITA CONSUMPTION, 1939-1953

Synthetic resins for plastics	1,052.8%
Primary aluminum	527.2%
Ammonia	500.0%
Chlorine	373.2%
Sulfuric acid, new	125.7%
Portland cement	76.3%
Pig iron	72.3%
Copper	60.6%
Slab zinc	32.7%
Lumber shipments	21.4%

—Chemical Engineering 3/54

Industry's Accident Toll

DISABLING WORK INJURIES last year totaled approximately 2,034,000, as against 2,040,000 in 1952, the Bureau of Labor Statistics has estimated.

The estimate included approximately 15,000 deaths and 84,000 injuries which resulted in some permanent disability, such as the amputation of a body member or the permanent impairment of some body function. The latter group included about 1,500 individuals completely incapacitated for any gainful employment for the rest of their lives. The remaining 1,935,000 cases were temporary injuries which disabled the workers for one full day or more but had no permanent ill effects.

As a result of these injuries, approximately 41 million man-days of work were lost during the year—equivalent to a loss from the labor force of 137,000 full-time workers for the entire year. When allowance is made for the loss of future production in cases of death and permanent physical impairment, the total economic time loss amounts to about 206 million man-days—equivalent to a year's full-time employment of about 687,000 workers.

—Monthly Labor Review 4/54

SAVINGS THROUGH SALVAGE

ONE of the few remaining areas of cost reduction in American industry today is salvage. To develop an effective salvage program, it is important not only to find uses for salvaged materials, but also to investigate conditions which make salvaging necessary and to eliminate them, if possible.

In order to accomplish these goals, management at the Eaton Manufacturing Company held meetings with supervisors and workers, explaining the aims of the newly established salvage department and the plans that were to be carried out to conserve material. Cooperation was asked of everyone in the plant. Posters, bulletins, and signs were placed in prominent locations, and articles were written for our company house organ and factory paper. As a result, many salvage ideas were submitted by the men on the line, who, obviously, are in the best position to offer suggestions on more effective procedures.

However, a successful conservation program requires more than sporadic drives on waste. It calls for persistent daily effort and intelligent and diplomatic guidance on the part of salvage personnel. This human relations work must be done by someone who is fair, patient, and enthusiastic about his job.

This person should be given adequate space for his stock and working area, a small amount of necessary equipment, and a small force of good men. It is important that his rank be comparable to that of a general foreman, so that he can have the necessary authority to administer his duties correctly.

It would be his responsibility to guide the work of the employees in his own department, direct the reworking of ma-

terial, supplies, and tools for re-use, and keep the necessary records. He must be kept advised of changes in production processes in the interest of conservation.

At our division, organized responsibilities are as follows: If the salvaged material is sent outside the plant for processing, the Supervisor of Salvage is responsible to the Manager of Purchases. The same is true for scrap and obsolete materials sold on the outside. Where salvage is to be reworked within the plant, the Supervisor of Salvage reports to the General Superintendent. At the same time, he often consults with various department heads to see if certain ideas are practical. It may be that an idea for salvaging is not feasible, and that it will be more practicable to sell.

For example, if the cost of salvaging a part is greater than 50 per cent of its original purchase price, it is our policy to sell rather than attempt to salvage. The one major exception is where lengthy delivery of a new item would necessitate a shutdown or similar costly delay.

It is advisable that the salvage department have control of all obsolete and scrap material taken off company property. Such items can be sold on the outside, scrapped, or made available to employees. Scrap lumber, cans, small obsolete tools, used furniture, etc., sold or given to employees, can be an important factor in creating good will. At Eaton the determining factor as to whether employees pay for salvage or not is whether such material could be sold. If the item has some value, the employee is charged the market price or recoverable value.

It is well known that scrap dealers realize much of their profit from the

segregation of various types of scrap in their yards. To increase the savings from scrap disposal, Eaton does its own segregation. Further, through the installation of a modern scrap-handling system, this material is moved from the originating sites, the cutting oils are reclaimed (further adding to the worth of the scrap), and the scrap is automatically conveyed

into waiting rail cars. After 20 months of operation, the new scrap-handling system resulted in total gross savings of more than \$235,000 for the Axle Division. The value of reclaimed cutting oils alone amounted to some \$53,000. And the total net savings, after deducting total original capital investment plus maintenance, were more than \$151,000.

—EDWIN S. CONNOR. *Purchasing*, March, 1954, p. 91:4.

WHAT SAFETY CONTRIBUTES TO PRODUCTION

THE MOST compelling reason for a company safety program is, obviously, the welfare of the people who work in its plants. However, an effective safety program can also contribute much to industry in increased production and lowered costs.

Safety's contribution to production efficiency can be divided into three main categories. In the first category can be placed lowered direct costs of accidents, such as reduced compensation and medical payments. In our company's U. S. plants, the direct costs of accidents have been reduced to a point where they are more than \$600,000 below manual-rate figures. This saving has resulted from reducing the accident frequency rate from 11.1 in 1945 to 1.5 in 1953 and the accident severity rate from 1.12 to 0.25.

Safety's second contribution to production is the lowering of the numerous indirect costs of accidents. All accidents, even minor cuts, delay production. In a serious accident time is lost not only by the injured employee but also by other workers in the department or plant. Also, a disabled employee requires a replacement. This involves costly training—in many cases resulting in waste of material

and loss of production during the training period. Finally, accidents and their causes affect employee morale. Low morale will in most cases greatly reduce a worker's efficiency and may eventually cause him to look for another job.

Safety's third contribution to production is probably the most important of all. Emphasis is generally placed upon the prevention of accidents, with its too-frequent negative implication. It can be clearly shown that successful accident prevention is a positive contribution to the quality and quantity of production. Safety doesn't merely save something, or prevent something; it also adds something. Since most accidents arise from some fault in design, equipment, arrangement, placement, training, supervision, operating procedure or practices, the basic causes of accidents are also the basic causes of inefficiency. By making sure that things are done the right way, therefore the safe way, management can accomplish these eight worthy ends:

1. *Reduce costly interruptions and delays.* Many of the inspection programs and security devices that result from a safety program do more than prevent accidents. They also detect unsafe con-

ditions that would cause breakdowns of equipment and thereby interrupt production. For example, relief valves on pressure vessels, installed primarily to provide safety, frequently aid in the continuity of operations.

2. *Improve the productivity of workers.* A good safety record means that every job is being done in the right way. The right way will not only prevent accidents; it will also result in less scrap, higher production, and fewer damaged machines. Furthermore, self-preservation itself dictates that dangerous jobs be done slowly.

3. *Improve employee relations by affording an area for cooperation between management and labor.* The participation of the employee and the foreman in accident prevention can be used to foster a better relationship. In our own plants, we encourage members of our supervisory staff to talk with each employee at least once a month on some specific aspect of our safety program. We require a tabulation of reports on these discussions. The participation of the employee in different aspects of the safety program gives him a feeling that he is "part of the team."

4. *Improve employee morale by increasing the desirability of the jobs.* In some industrial plants the frequency of accidents is so high that people work there only as a last resort. Plants with good lighting, guarded machinery, good housekeeping, adequate medical facilities, and effective safety programs are plants where employees have high morale and, in general, do efficient work.

5. *Help train supervision to do a better job with its workers.* You cannot

assure safety merely by providing the best plant layout and safest equipment. A plant safety record represents the sum-total of the attitudes of all the men and women who work there. Once a supervisor appreciates this fact and attempts to foster an awareness of safety among the people he supervises, he is not only promoting safety—he is also learning the principles of leadership.

6. *Increase employees' loyalty through their interest in outstanding safety records.* The interest and pride employees develop in setting outstanding safety records increase their loyalty to the company. It is also quite apparent that safe working conditions give the employee a sense of security against injury and lost time and thereby add to this pride.

7. *Improve plant housekeeping.* A trim and orderly plant is both safer and more efficient. And, where attention has been given to safety, you can count on improved appearance.

8. *Assist in designing more productive equipment and in laying out more efficient plants.* Proper ventilation not only makes a workplace safer; it helps production. The substitution of a stairway for a ladder, besides increasing safety, provides for quicker, more economical movement of employees. Wide aisles for safer movement of materials are more efficient because materials can be moved with a minimum of interference. The replacement of heavy hand-lifting with mechanical handling equipment eliminates strain on the human body and speeds the handling of materials. Many famous developments, such as the Westinghouse air brake, were developed principally to promote safety but have contributed greatly to efficient operation.

—From an address by J. E. TRAINER (Vice President in charge of Production, Firestone Tire and Rubber Company) before the Greater New York Safety Council.

Also Recommended • • •

TESTED IDEAS FOR VALUE BUYING. *Purchasing* (200 East 42 Street, New York 17, N. Y.), May, 1954. \$1.00. This 100-page feature report on the "value analysis" approach to more effective purchasing contains a detailed checklist to help keep the industrial buyer alert to the cost-saving possibilities in his job. 300 company case examples show how analysis of specific buying problems resulted in more profitable purchases for both large and small purchasers of many different types of industrial supplies and equipment.

STATISTICAL TECHNIQUES FOR MANAGERIAL CONTROL. By Howard L. Jones. *Industrial Quality Control* (161 West Wisconsin Avenue, Milwaukee 3, Wis.), May, 1954. \$1.50. A very lucid and helpful explanation of the basic statistical techniques involved in using and interpreting control charts, which may be applied to a wide range of managerial problems—from analysis of one worker's production to study of company-wide operating results. While the versatility of these control instruments is great, they all operate on the same fundamental principles, which are set forth here.

PROGRAM YOUR LIGHTING MAINTENANCE. *Steel* (Penton Building, Cleveland 13, Ohio), May 3, 1954. 50 cents. Presents a system for solving lighting upkeep problems, including suggestions on scheduling cleaning jobs, checking voltage, and replacing lamps. Group lamping is more economical than replacing lamps individually, the author suggests, giving a table for figuring the costs of spot and group relamping.

WHAT DOES A SMALL SHOP GAIN FROM AUTOMATION? *American Machinist* (330 West 42 Street, New York 36, N. Y.), April 12, 1954. 50 cents. Automation can be tailor-made to suit the needs of any small shop or of departments within medium-size or large plants, according to this article. However, before deciding whether to use automation, management must analyze all the problems involved with and without it. To illustrate a method of making this analysis, the article includes a checklist covering the preparation of machine cycle data, automation plant layout, new process sheets based on complete information, and schematic drawings of special-purpose machines; an analysis of the cost of the entire project; and instructions for compiling data for review.

INCREASING THE EFFECTIVENESS OF MAINTENANCE. By Steve Dembicki. *Plant Administration* (522 Fifth Avenue, New York 36, N. Y.), February, 1954. 50 cents. To improve maintenance operations, estimated by some companies to be only 50 per cent effective, the author outlines a program of craft measurement which entails the development of standard methods for performing craft jobs and the use of time standards against which work efficiency can be measured. Among the advantages seen resulting from such a program are better work planning and consequently, greater work efficiency and more direct supervision from craft supervisors.

HOW TO COORDINATE SUBCONTRACTING TO MEET PRODUCTION SCHEDULES. By George E. Fouch. *American Machinist* (330 West 42 Street, New York 36, N. Y.), February 15, 1954. 50 cents. This special report is drawn from the experience of General Electric Company, whose production of the J-47 jet turbine entails a subcontracting relationship with no less than 4,000 companies, predominantly in the "small business" category, who provide most of the components and supplies necessary to its production. How GE has achieved coordinated control over this vast network is described here.

NOISE: HOW TO CONTROL IT. By E. G. Meiter. *Safety Maintenance and Production* (75 Fulton Street, New York 38, N. Y.), February, 1954. 50 cents. A general discussion of the noise problem in industry and its solution by medical and engineering means. Some of the measures suggested to combat noise are the removal of noise at the source, if possible; more effective maintenance to eliminate noise resulting from worn machines; the substitution of less noisy operations, such as spot, arc, or flame welding for riveting; rubber mountings for heavy machines; and the use of sound-absorptive materials.

RX FOR ACCIDENT PREVENTION. By Phil Hirsch. *Commerce* (1 North LaSalle Street, Chicago 2, Ill.), Vol. 50, No. 12. 35 cents. Job-placement physical examinations have achieved remarkable results in accident-prevention and cost-saving, this article shows. The East Peoria plant of the Caterpillar Tractor Company, for example, achieved an accident record less than one-fourth the average for the industry as a result of determining the physical requirements of each job in the plant and then matching the worker to the job.

Marketing Management

ARE YOUR SALES QUOTAS OUT OF DATE?

MANY people who sell to industry are still thinking of the market in terms of 1939, and their sales territories and distributorships are laid out accordingly. However, the old pattern doesn't fit.

From 1939 to 1953 the Pacific Coast has more than doubled in size as an industrial market. So have the West South Central and West North Central states. The East South Central region grew 75 per cent as an industrial market; the East North Central, 71 per cent; the Mountain States, 71 per cent; the South Atlantic States, 50 per cent; the Middle Atlantic States, 46 per cent; and the New England region, 30 per cent. As can be expected, the regions showing the greatest gains are the late-comers on the industrial scene.

However, these figures show only proportionate growth. The table below gives us the actual share of each region today in the total U. S. industrial market, compared with pre-war.

Region	1939	1953
New England	11.6%	9.3%
Middle Atlantic	28.6%	25.9%
South Atlantic	11.7%	10.9%
East North Central	28.2%	29.8%
East South Central	4.3%	4.6%
West North Central	5.1%	6.1%
West South Central	3.5%	4.5%
Mountain	1.1%	1.1%
Pacific	6.0%	7.8%

In the light of these changes how should you make a market analysis? Standard procedure is to start with your own sales figures, and divide them by territory and by industry, year by year.

However, that isn't enough. You have

to find out how you are making out against par. Let us assume that your sales in the Southwest (Texas, Oklahoma, Arkansas, Louisiana) are up 75 per cent. These figures look good until you realize that this region has more than doubled (up 104 per cent) since 1939. So instead of patting yourself on the back, you have to do something to take up the slack there.

How do you set up a yardstick that will tell you how much business you ought to be getting out of the different areas? Over-all manufacturing employment figures are too crude for most purposes. They would do if you were selling time clocks, drinking fountains, or something else sold equally to all industries in proportion to employment. However, most products are used to a far greater degree in some industries than in others.

Therefore, if you are using employment as your yardstick, you will need an employment count for each industry in each area. You can get that count from the U. S. Department of Commerce publication *County Business Patterns*. (County figures are always used in setting up industrial sales territories, since such territories frequently don't follow state lines.)

Where to go from there? First, you have to know how much you should be able to sell to a given industry per 1,000 employment. If you don't have that information, you can get it by asking your customers for it.

Or you can do what a manufacturer of industrial fire-fighting equipment did. He selected a model territory from the viewpoint of sales coverage and diversification, and used it as his standard. After analyzing his sales in this territory by industries, he figured out annual sales per industry per 1,000 employees in that territory on the basis of his *County Business Patterns*. Let's say his calculations worked out to \$600 sales per 1,000 employees per year in a high-fire-hazard industry like petroleum, \$100 per 1,000 employees in an industry with a low fire hazard like pottery-making.

This manufacturer did this for every major county and came up with a sales quota system that has been highly successful right from its inception about seven years ago. As so seldom happens, the sales force accepted it without a grumble. Reason: The yardstick is intelligently worked out and is easy to understand.

However, this manufacturer doesn't stop merely with figuring quotas for territories. He applies them directly to individual accounts. The salesman gets a

quota for every customer or prospect of any consequence in his territory. A well-known source of individual plant employment figures is state industrial directories.

If you find that a salesman or distributor views quotas with horror, you can be sure he was frightened by an inept, blundering quota in his formative years. Unfortunately, there are those who use the ouija-board method of arriving at quotas. Another erroneous approach is the rough-and-ready, or bootstrap, technique of calculating quotas, exemplified by the manufacturer who merely added 30 per cent to the previous year's sales, just as he had added 30 per cent to sales the year before, completely disregarding conditions within the distributor's territory.

Then there's the other extreme—the perfectionist, who strives for decimal-point accuracy, but who gets only headaches, because market analysis is no more exact than is law or medicine. A manufacturer who runs a notably successful system says: "If you're 70 per cent to 80 per cent right in establishing sales quotas, you've reached perfection."

—ARTHUR H. DIX. *Printers' Ink*, March 12, 1954, p. 43:3.

THE COMPONENTS OF SELLING

FOR ALL ITS simplicity of purpose, the selling function is actually complex. Top sales performers realize this. They know that the selling job comprises six main activities—goals which the successful salesman will try always to keep before him. These are:

1. *To do his part in building volume—* by routing his trips so that his territory is properly covered; making the maximum

number of calls consistent with good results and available service; obtaining accurate and comprehensive knowledge of his customers, both as to business and personal facts; knowing his own lines and their uses so that he may represent them to the best advantage; consistently watching for new prospects; and intelligently observing business conditions in his territory so that he may aid the sales

manager in fixing the proper yearly sales budget for each customer.

2. *To aid in the preservation of net profits*—by selling merchandise on the basis of value, quality, and service; paying careful attention to all returns and allowances for sales reasons, investigating each case thoroughly in order to learn how best to deal with such situations and keep them at a minimum; and striving for economy in his expenses.

3. *To help merchandise the product*—by knowing the facts about competitive offerings and their uses; making constructive suggestions regarding new items for old uses, old items for new uses, and new items for new uses; and continually furnishing detailed information on the sales outlook which will help home office planning.

4. *To do his share toward administrative economy*—by prompt, careful attention to matters of credit and collections referred to him; intelligent, well-balanced assistance in the adjustment of all differences between the customer and the home office; writing up his orders accurately

and completely, showing all information necessary for proper execution; and prompt attention and reply to house communications.

5. *To understand his part in manufacturing economies*—by a knowledge of those features of selling which increase factory costs; appreciating uniform manufacturing schedules, based upon intelligent forecasting of the probable market; recognizing the necessity for extreme effort in realizing these market forecasts so that the manufacturing economy may be assured; and helping to remove peaks and depressions in sales.

6. *To be an important factor in building good will*—by correctly representing the prestige of his concern through his appearance, personality, and habits; a correct understanding of the customer's point of view, while maintaining a firmness which will gain respect for his own; courtesy, attention, and friendship which will gain him ready access to his customers; and a respect for his own firm that will be reflected in a corresponding respect on the part of the customer.

—ED COREKIN. *Chicago Market News* (1240 Merchandise Mart Plaza, Chicago 54, Ill.)

The Theory and Practice of Reciprocity—A Survey

DOING BUSINESS with the man who does business with you seems natural enough, but in the context of modern industrial organization it can pose difficult problems—particularly during periods of heightened competition.

Thirty-four per cent of the purchasing agents replying in a recent survey said they had recently observed increased pressures from suppliers' representatives for reciprocal buying, while 28 per cent said they believed their own sales forces had been bringing more such pressures to bear on customers of late.

Only 2 per cent of the respondents said their companies have any written statements of policy on reciprocity, but 84 per cent said that, regardless of formal policy, they generally give preference in their buying to customers of their companies, provided price, service, and quality are acceptable.

Fewer than one out of three respondents, however, appears to approve of reciprocity in principle. Sixty-nine per cent regard it as inconsistent with effective competition; 69 per cent think its advantages in the building of good vendor relations are outweighed by its disadvantages; and 75 per cent doubt whether a policy of reciprocity results in any net gain in sales volume or profits.

—*Purchasing* 4/54

PRICE-CUTTERS ARE GRABBING THE BALL

RETAILING is going through an upheaval that may prove as significant as that which produced the supermarket back in the 1930's. This current revolution in the market place, which affects appliances and hard goods, has no name as yet. However, since it gets its identity from its chief symptom, the discount house, it might be called the Discount Revolution.

Will the discount house come to dominate the selling of appliances and many other hard goods, as the supermarket came to dominate food retailing? At this stage of the game it's pretty hard to tell. There are countervailing forces—for instance, the development of full lines of appliances by a few major manufacturers works in the direction of the franchised agency operation familiar to the auto industry.

One thing does seem certain, however: No matter what form the distribution of appliances and other hard goods finally takes, the cost of distribution is due for a permanent readjustment—downward.

The readjustment has probably already taken place. In a recent national survey, it was found that you can now buy most appliances at far below the "suggested" prices. The discount house has made its mark.

Today it is possible to distinguish five broad, general types of price-cutting operations:

1. *The distributor* who sells out the back door to retail customers. The man who could get it for you wholesale has gone on a more organized basis in a lot of cases. The furniture field is rife with wholesalers who sell to the retail trade.

2. *The industrial supply house* that

does a discount business on the side in consumer goods.

3. *Brokers*, or "hip pocket" operators, who don't stock anything, but will get it for you somewhere. They generally charge 10 per cent over their cost.

4. *Buying clubs*. These are group-buying plans that operate in connection with church groups, fraternal organizations, or labor unions.

5. *The straight discount house*. It may issue a card, but the card is more a way of advertising than anything else.

Interlaced with these operations are all kinds of subsidiary groups. For example, there is the Union Buyers League in San Francisco, which acts as liaison between 250,000-odd labor union members and some 100 companies willing to sell at a discount.

There are various degrees of complicity in discounting. One example is provided by the Ohio distributor who lets local discount houses bring in customers to look over the stock before buying—at a discount.

Distributors come in for plenty of blame for the present situation. Said a Cleveland discounter recently: "Every one of the distributors has more dealers on his books now than ever before, which means they will sell to anyone in order to move their stocks. After all, we discount houses are pretty good customers."

It is generally agreed that manufacturers look the other way. They could undoubtedly do much to wipe out price cutting, but there are some big deterrents. One is the prospect of being underpriced by competitors who are willing to let their price level fall. Another is the expense of policing fair trade, which raises the question: Is it worth it?

There are innumerable subterfuges, American ingenuity nowhere showing to better advantage than in price cutting. In New York and other cities a discount house will sell you a fair-traded item at full list price—and throw in a non-fair-traded item for practically nothing. In San Diego, dealers are allowing \$5 on an old frying pan in a trade-in on an appliance. In Detroit they'll allow you

\$20 on your old broom when you buy a vacuum cleaner.

There are other loopholes. The latest to be exploited is a legal loophole in the fair trade laws, which, according to at least one recent court decision, do not cover interstate shipments. Hence the recent influx of discount houses into the District of Columbia, which has no fair trade law.

—*Business Week*, April 3, 1954, p. 158:2.

What Distributors Want in Manufacturers' Factory Schools

INDUSTRIAL DISTRIBUTORS agree that there are three effective methods for manufacturers to teach distributor salesmen about their products and how to sell them. A recent spot survey of leading distributors indicates a virtual three-way tie with only a slight preference for "factory schools." Manufacturers' factory schools got 15 votes; sales meetings, 14 votes; and calls made by manufacturers' representatives with distributors' salesmen, 13 votes.

Eighty-six per cent of the distributors feel that factory schools are worth while; 14 per cent rate them as only "fair." Only 59 per cent of the distributors gave sales meetings an "excellent" rating, perhaps because top brass are near schools but remote from the isolated sales meetings held in the distributors' places of business. It should also be remembered that when a manufacturer sets up a school at the factory for even two days, he uses between three and six men, all specialists. None of these "experts" is available to the territorial representative when he holds a meeting.

The majority of distributors feel that the expense of sending distributor men to factory schools should be shared on a 50-50 basis with the manufacturer. The remainder suggested that the distributor pay for the transportation and the manufacturer foot the bill for room and board while attending school.

Most distributors feel that five days is the proper length of time for their salesmen to spend at a factory school. About a third of them will approve of 10 days if the product justifies it, while a few think three days in school is enough.

It is not always economically practical to "bring the school to the distributor," as suggested by several distributors. One Connecticut manufacturer successfully did the next best thing by holding two regional schools of two days each. This manufacturer also brought his own salesmen in from the field to attend these schools. The reason for this was twofold; first, as a refresher for his own men; and second, to enable them to meet a great many distributors' men quickly.

—*Sales Management* 3/1/54

ANALYSIS OF CONTROVERSIAL claims about unsatisfactory merchandise proves that in about two-thirds of the cases the customer is wrong. In the other 34 per cent, the fault is with the merchandise, according to Jules Labarthe of the Mellon Institute, Pittsburgh. His findings are based upon data accumulated during years of studying complaints from department store customers.

—*Back Talk* (J. M. Kesslinger & Associates, Newark, N. J.) No. 69

Also Recommended • • •

WHICH BRANDS SELL BEST AND WHERE. By Harold E. Green. *Printers' Ink* (205 East 42 Street, New York 17, N. Y.), May 7, 1954. 25 cents. Presents the highlights of a 19-market analysis showing the percentages of families using various products, the market standing of brands in product groups, and for some items, the percentage of products bought new in a given year. Among the key trends found in the data are a gain in the strength of well-advertised brands and a rise in use and sales potential for most major automatic household appliances.

THE OVER-65 MARKET—READY TO BUST INTO A BOOM? By Richard Y. Giles. *Printers' Ink* (205 East 42 Street, New York 17, N. Y.), May 7, 1954. 25 cents. Though six out of 10 retired persons have "money to burn," not enough is being done to satisfy the unusual needs and unique purchasing power of the over-65 market, the author states. The problem arises, not from any failure on the part of American business, but from the difficulty in getting specific information about this highly individualized market. The author attempts to fill the gap by furnishing a rough profile of the housing, food, clothing, drug, and recreation needs of the elderly person.

GOOD INDUSTRIAL STYLING—KEY TO HIGHER SALES. By George W. Walker. *Iron Age* (Chestnut and 56 Streets, Philadelphia 39, Penna.), February 4, 1954. 35 cents. Almost all items sold on the open market, even completely functional products like machine tools, can benefit from improved styling, the author believes. Good styling can improve the functional qualities of such products as the automobile and vacuum cleaner, and promote worker efficiency and greater pride of workmanship in the use of machine tools. However, thorough product research, as well as full cooperation from management, sales engineering, and production, are required if a styling program is to succeed.

BUSINESS APPRAISES CONSUMER TESTING AGENCIES. By Eugene R. Beem and John S. Ewing. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1954. \$2.00. A unique type of marketing institution, the consumer-testing agency, has become in the postwar years a factor to be reckoned with. The authors, on the basis of a survey of a cross-section of American enterprise and discussions with technical officers and con-

sumer agency officials, have attempted to evaluate the product ratings made by Consumers' Research and Consumers Union, their effect on consumer behavior, and their impact on business policies. With all their limitations, both CU and CR are rendering a valuable social service by helping consumers and stimulating quality improvement, the authors conclude.

MUDDLED . . . MISUSED . . . MISUNDERSTOOD . . . THAT'S SALES PROMOTION! By William R. Kelly. *Sales Management* (386 Fourth Avenue, New York 16, N. Y.), Vol. 72, No. 2. 50 cents. Lack of coordination among sales, advertising, merchandising, and promotion efforts is revealed in the answers of 44 sales promotion managers to a survey which covered: working definitions of sales promotion used in individual companies, the place of the promotion manager in the organization structure, budget problems, etc. The survey findings suggest that greater understanding of the function of sales promotion can best be created by clarifying its four major responsibilities: analysis, creation, production, and implementation.

THE FUROR OVER "DISCOUNT SALES." *Challenge Magazine* (32 Broadway, New York 4, N. Y.), May, 1954. 20 cents. The thriving, multiplying discount houses, estimated by the National Retail Dry Goods Association to number at least 10,000 across the country, constitute a new force in the determination of profit margins, in retailing generally, in distribution, and in economics. Viewing price-fixing and price-cutting as phases of the constant evolution in marketing, the author examines the discounters' methods of operation and the reasons for their success. The fact that the discount house applies to distribution some of the key principles of mass production may have something to do with its phenomenal rise, he concludes.

EIGHT WAYS TO PUBLICIZE YOUR COMPANY'S NAME. *Management Methods* (141 East 44 Street, New York 17, N. Y.), January, 1954. 50 cents. Somewhere between paid advertising and free publicity is a relatively unexplored area for profitable public relations work, this article points out. Examples of the devices described here for attracting customers include: a slide-rule calculator distributed free by a screw manufacturer; a photo service for business paper editors started by a manufacturer of portable power tools.

Financial Management

THE COMPTROLLER LOOKS AT THE SUGGESTION SYSTEM

P. C. SALMAN

**Assistant Comptroller
Socony-Vacuum Oil Co., Inc.**

AMONG the responsibilities of a comptroller are the analysis and interpretation of financial statistics for presentation to other company officers and directors to assist them in the measurement of results. Naturally, the comptroller is concerned with the profitability of the various proposals he may investigate. So it is with a suggestion system.

Do you expect a payout from your suggestion system? If you do there must be found some way to evaluate it. This is a difficult task. Suggestion systems do not lend themselves to any exact calculations, since the elements to be evaluated are most nebulous. However, if one is willing to make certain assumptions an evaluation can be made; though not exact in any material degree, such an evaluation might, if repeated, show a trend over the years which would be of some value to a Suggestion Administrator. I have attempted such an evaluation and offer it merely as a possible approach to estimating the dollar value of such a system.

The general policies of the suggestion system used in this example were developed and are coordinated by a committee, appointed by the Board of Directors and composed, let us assume, of the following executives: Industrial Relations

Department Manager, Market Research and Analysis Department Manager, Transportation Department Manager, Member of the Manufacturing Committee (or Manufacturing Manager), Assistant Comptroller, and Suggestion System Coordinator.

The suggestion system was designed to assist management at all levels of the company by soliciting employee ideas. The local management of all major subdivisions of the company made their individual decisions to install the system and appointed local award boards to administer it.

Since improvements of some type and degree are the sole objective of this suggestion system, a financial appraisal is of particular importance. If the system is to compare favorably with other uses of corporate funds, it must reflect an adequate return, after covering all expenses. It takes a considerable amount of money to establish and maintain a suggestion system until the time when it can be said that accumulated suggestion savings have provided the working capital requirements of the system.

I look upon this suggestion system example as an operation which has paid out promptly and has provided an adequate return on investment. Certain details on payout and return on investment will give support to that statement.

An address before the New York-Philadelphia Conference of the National Association of Suggestion Systems.

Payout indicates the length of time required to get back the original investment, but does not evaluate economic life. Return on investment measures the amount of earnings over the estimated life of the investment. Admittedly, there are weaknesses in each of these measurements. They are merely guides and cannot be substituted for common sense.

Three basic assumptions were made in developing the earnings of the suggestion system.

1. Although it was realized that the "idea well" probably would never run dry, a useful life of 20 years was assigned to the suggestion system, for purposes of measuring return.

2. Because award boards make awards only for ideas used, it is believed that every accepted suggestion results either directly or indirectly in increasing production or reducing costs. It is realized that the amount of savings involved in certain types of suggestions—safety ideas, for example—usually cannot be measured. While analysis showed that most ideas awarded over \$100 were for direct savings suggestions, the great majority of total ideas accepted were of the indirect or intangible type.

For the purpose of measuring the suggestion system payout and return on investment it is assumed that the ideas accepted for which direct savings could not be estimated accurately paid for themselves over a three-year period. Note that this includes only *accepted* indirect savings ideas; nothing was provided here to cover the cost of rejected ideas. Further, it was assumed that the award money was returned over three years, not in the same year in which an award was made.

Therefore, in the financial testing of

the results of the suggestion system, the calculated savings resulting from ideas which produced measurable savings must pay for themselves; cover the cost of all ideas rejected; and also provide the profit, if any.

3. In this suggestion system, first-year savings are estimated where possible and awards are based on that calculation. The total direct savings resulting from most tangible ideas were greater than the first-year calculation. In order to determine a conservative total savings average, suggestions accepted during a six-month period were reviewed and selected at random. On the basis of this study, estimated total savings were established at three times the first-year calculation. Most of the top awards made during the period reviewed were for ideas which should reflect savings in profit-and-loss statements for many years to come, and the three-year average is thought to be on the conservative side.

The suggestion system cost was divided into the following categories:

<i>Variable Expenses:</i>	<i>Fixed Expenses:</i>
Awards	Administrative Expenses
Investigations	
Meeting Time	
Installation	

The fixed expenses did not vary with the volume of suggestions processed; the variable expenses, on the other hand, increased or decreased in direct proportion to the volume of suggestions processed.

Awards expenses were the actual amounts paid to the suggesters. Direct savings ideas were paid at a rate of approximately 10 per cent of the first year's earnings. Intangible ideas were evaluated as to the degree of benefit to the company by applying a formula which gives weight to the importance of the idea and the limits of use. Suggestions received were

divided into the following categories for statistical purposes:

Monetary Savings	Decreased Supervision or Equipment
Customer Relations	Decreased Supervision of an Operation
Public Relations	New Uses for Present Equipment
Employee Relations	New Uses for Present Facilities
Improved Safety	New Uses for Present Products
Decreased Liability	
Increased Sales	
Improved Procedure or Operation	

Investigation expenses were estimates of systems, engineering, statistics, and various other departments' costs applicable to the suggestion system. As figures below indicate, this represented 38 per cent of the cost of processing each suggestion received. I believe that all the so-called "hidden expenses" were provided for in this category.

Meeting time expenses consisted of allocations of suggestion board members' salaries based on the time required and the average salaries and labor burden.

Installation costs were the plant and equipment additions as well as the current expense items applicable to accepted suggestions. Because these expenditures were required to effect the savings credited to the suggestion plan, the cash outlay was considered a cost of the system.

The administrative expenses were controlled by budgets and consisted of the following:

Administrative Salaries	Travel
Posters (national and local)	Stationery and Office Supplies
Promotion Expense	Telephone and Telegraph
Annual Report to Employees	Display Exhibit Forms
Rent and Office Services	Miscellaneous

Averages based on operations during the first six years (1948-53) showed that for every group of 25 suggestions received six were accepted. Of the six accepted, a forecast showed one to be a

savings idea. The other five ideas used were of the indirect savings type. The calculated average savings applicable to each group of 25 suggestions received, based on the assumptions previously explained, breaks down as follows:

One direct savings idea	\$1,600 savings
Five intangible ideas	250 savings

Total savings \$1,850 for each group of 25 suggestions received or \$75 per suggestion received.

The cost of each suggestion received was analyzed as follows:

Variable Expenses	Dollar Cost	Percentage of Total Cost
Awards	\$ 6	12%
Investigation	19	38%
Meeting Time	5	10%
Installation	4	8%
Total Variable Expense	\$34	68%

Fixed Expenses

Administrative Overhead	\$16	32%
Total cost for each suggestion received ..	\$50	

The number of suggestions received in each of the six years of operation was approximately the same and the estimated cost per idea received was approximately constant. The number of awards, and the savings, varied considerably.

1948: 14 per cent of ideas received were accepted; savings estimated at \$280 per accepted suggestion.

1949: 23 per cent of ideas received were accepted; savings estimated at \$300 per accepted suggestion.

1950: 23 per cent of ideas received were accepted; savings estimated at \$320 per accepted suggestion.

1951-53: 30 per cent of ideas received were accepted; savings estimated at \$330 per accepted suggestion.

Payout Analysis: As has already been stated, it was assumed that the calculated suggestion savings were realized in three years. In other words, savings attributable to 1948 suggestions were recovered proportionately in 1948, 1949, and 1950; 1949 suggestions savings were recovered rateably over 1949, 1950, and 1951, etc. (Example: 1950 savings realized were one-third of savings resulting from 1948 suggestions, plus one-third of 1949 suggestion savings, plus one-third of 1950 savings.) Savings realized in each year were applied against the out-of-pocket expenses to determine the net cash income or outlay.

A tabulation of the figures showed that the suggestion system required an original capital outlay equal to $1\frac{1}{2}$ times the gross out-of-pocket expenses of the first year of operation. At the end of five years the accumulated earnings of the suggestion system had, in effect, repaid the original capitalization and provided the necessary working capital.

Return on Investment Analysis: There are many formulas which relate earnings to capital outlay. Perhaps the simplest one is "Total Return on Investment": i.e., total earnings after deducting investment cost, divided by the capital investment.

If these earnings and costs, based on the experience of the past six years are projected at the end of the assumed 20-year economic life of the suggestion system, the operation will have earned an 800 per cent total return on investment.

Again it should be emphasized that this analysis is replete with assumptions, and that any results cannot be accepted as provable facts but only as a basis for arriving at some idea of the dollar value of a properly organized and operated suggestion system, and as a guide to its continuance and improvement.

While payout and return on investment analyses are only tools used in aiding management's judgment, it does seem that most managements would be interested in an investment which can pay out in five years, and earn 800 per cent over a 20-year period.

Random Reflections on the Annual Report

THE FOLLOWING good-natured "ribbing" of corporation annual reports appeared in a recent issue of *Arizona Progress*, published by the Valley National Bank of Phoenix, Arizona:

"The annual report has become a thing of beauty and a joy for printers. Gone are the days when corporation presidents simply sent out a terse mimeograph stating that the company earned so much last year compared with so much the previous year. It may or may not have contained the rousing assurance that 'if all goes well, we hope to maintain the current dividend rate.' Today it takes a CPA to tell what a company made after reserves, amortization, taxes and countless charts, graphs and 'candid' pictures of executives looking busy and employees looking happy. . . .

"The most complicated, and dullest, part of any report is the President's Message. It must strike exactly the right balance between optimism and conservatism. If things appear to be going too smoothly, stockholders may get the unthinkable

idea that the management is overpaid. If difficulties are overstressed, they may deduce that the job is too big for the incumbents.

"The best course is to treat so casually or so technically of company affairs that no one can figure out what happened. In closing, be sure to come out strongly against communism and high taxes. This shows a firm grasp of the foreign situation as well as of domestic problems.

"Of course, only two people will ever read the great opus all through: (a) an assistant statistician in some brokerage firm, and (b) Old Man Smithers, age 83, who owns 10 shares of stock. The latter will also attend the Annual Meeting and make his traditional speech criticizing the company's dividend policy and its lack of foresight back in 1902, when it failed to buy out Henry Ford."

—*Management Briefs* (Rogers, Slade & Hill, New York) No. 63

Can State Tax Rules Be Simplified?

MULTIPLE TAXATION and increased costs of state tax administration are some of the direct results of "diverse and inconsistent" state tax rules for apportioning net income of general business corporations in interstate commerce, according to a research report* just issued by the Controllershship Foundation, Inc., New York.

Analyzing tax laws, regulations, and administrative rules as they affect actual industrial and mercantile corporations which are in interstate commerce, the report lists and compares methods followed by the 32 states which tax net income of out-of-state companies, as well as by the District of Columbia, Alaska, and Hawaii.

Greater standardization of rules and definitions might bring some increases in tax yield by lessening deductible costs and reducing administrative expenses, the report indicates. It also points out the existence of "roadblocks," such as the differing characteristics and problems of the various taxing jurisdictions.

"Inconsistencies in the existing rules of apportionment permit numerous situations in which there may be either multiple taxation or omission from taxation of certain elements of corporate net income," says the report. "These rules range from vague and ambiguous ideas to extremely detailed, mechanical procedures." But to achieve a uniform allocation formula, certain concessions would be required of both taxpayers and taxing jurisdictions. For the taxpayers, such a formula might occasionally result in "somewhat greater taxes than those existing under present procedures." Taxing jurisdictions, on the other hand, would have to recognize that "the most appropriate manner of adjusting revenues to budget requirements is through changes in tax rates rather than by variations in definitions, interpretations, and enforcement procedures."

* *Allocation and Apportionment of Corporate Net Income for State Taxes*. Available at \$1.50 per copy from Controllershship Foundation, 1 East 42 Street, New York 17, N. Y.

BETWEEN 1940 AND 1953, our population increased 21 per cent from 132 million to 160 million people. At the same time, our industrial output increased 100 per cent. One-fifth of this increase in output is attributable to the increase in population during this period. The remaining four-fifths of output increase was due to higher productivity, improvement in plant and equipment, and the need for military materials and equipment.

—*Management Information* (Elliott Service Company, 30 North MacQuisten Parkway, Mt. Vernon, N. Y.) 5/3/54

PROFIT SHARING IN ACTION: A SURVEY OF COMPANY PRACTICES

IN RECENT YEARS, profit sharing has been steadily gaining in importance as a leading item in the field of employer-employee relations. To explore this trend and to furnish factual information about profit-sharing practices, the Profit Sharing Research Foundation recently analyzed over 300 profit-sharing plans in industries employing a total of three-quarters of a million workers. The study encompassed all three types of profit-sharing plans—cash, deferred, and combination—and covered businesses ranging in size from small to very large.*

The average age of the profit-sharing plans was found to be 10 years. There tended to be more cash plans, or those distributing a portion of the profits in cash bonus according to a regular formula, in small firms. Deferred plans—those which pay a portion of the profits into a trust fund which is made available to the employee at a later date—were most often found in large businesses. Combination plans, paying a portion of the profits in cash but also having a deferred element, appeared most frequently in middle-sized firms. However, the study revealed an increasing trend toward installing plans with deferred elements.

Plans to which the employees contribute are more characteristic of large companies than of small companies, and deferred plans are more likely to be contributory than are deferred elements of combination plans, it was found.

The most frequent percentage of profits

given by employers, without prior reservations on profits, is between 10 per cent and 25 per cent. However, where prior reservations are first taken from profits, the commonest percentage given to profit sharing becomes 50 per cent. Median payments to employees in terms of their salaries under cash plans are 10 per cent of pay; under deferred plans, 10.25 per cent of pay; and under combination plans, 15 per cent of pay. Low percentages of contribution of profits occur most frequently in large companies; high percentages, in small companies.

Companies sharing profits before taxes outnumber those sharing after taxes by the following ratio: 2 to 1 for cash plans; $4\frac{1}{2}$ to 1 for deferred plans; and 3 to 1 for combination plans.

The waiting period is the commonest means of excluding employees from participation in profit-sharing. Cash plans run to short waiting periods, and deferred plans to long, but the combination plans follow no clear pattern in this regard. Newer plans tend to have longer waiting periods, especially where employee age has a bearing on eligibility.

Profits are distributed most often to employees on the basis of how much they earn. However, limits are imposed to secure an adequate share of profits for the lower income group. In deferred or combination plans the employees have the full right to withdraw any money which they personally put into the plan at any time. However, the employer's contribution is a different matter. It usually takes a number of years before the employee is entitled to his share of this money credited to his account.

* A detailed description of the study can be found in *Profit Sharing Patterns*, by P. A. Knowlton, published by Profit Sharing Research Foundation, 1322 Chicago Avenue, Evanston, Illinois. 144 pages. \$10.50.

In cash profit sharing, annual payments outrank those made on any other basis. Semi-annual and quarterly payments are equal in frequency of appearance.

How do companies having profit sharing plans rate them? It was found that 94 per cent of the employees work for companies whose executives rate their plans "successful" or "very successful."

Those managements which gave their profit-sharing plans neutral or negative ratings most often blamed the following causes for plan failure: (1) faulty communication; (2) small profits; (3) profit-sharing payments, or credits, too small to be impressive.

Large companies tended to rate their plans successful more often than small

companies, and success ratings were larger in proportion among financial and professional enterprises than among manufacturing or mercantile enterprises. Profit sharing fared as well in the publicly owned corporations as in the privately owned firms. According to the study, companies with unions have successful profit-sharing plans. However, the success rating of nonunion companies is even higher.

Contributory plans in general rated higher than non-contributory plans as far as success was concerned; and, among contributory plans, the most successful ratings tended to be given to those prescribing employee contributions of below median size.

FORGET ABOUT THE PENNIES

IN STRIVING TO improve their practices, accountants have devoted much thought to reducing clerical expense and producing more intelligent and readable reports. In recent years it has been found by various companies that the elimination of pennies from many, or all, reports and from most accounting entries has produced both these results.

At Lever Brothers Ltd., we found that the adoption of the centsless system would give us the following advantages:

1. It speeded up posting ledgers (whether by hand or machine).
2. There was an improvement in accuracy. This is rather difficult to measure, but when the number of figures used is reduced by 40 to 50 per cent, we are certain that accuracy shows marked improvement. Also, the reduction in time required to record the figures gives the ac-

countant more time to check his work.

3. It speeded up the totaling and subtracting in each account to arrive at the balance.

4. It reduced work when writing off accounts at the end of an accounting period. There was also a substantial saving in typing the accounts, checking the typing, and Comptometer-checking the typed accounts.

5. It resulted in savings in stationery. We were able to save space in our subsidiary ledgers by eliminating the cents columns as the various forms used came up for recording or redesigning. Smaller ledger sheets require smaller binders to hold them, reducing costs and requiring less storage space to house records that have to be preserved.

Our method of handling centsless accounting is, briefly, as follows: As

vouchers are received from our suppliers they are recorded in our accounts payable ledger, numbered, marked as to date payable, and given the necessary approvals for quantity and quality of goods received, value, etc.

Each voucher is then allocated to the account, or accounts, to which it is to be charged in our general ledger, and handed over to the clerks who maintain our cost records. Allocations on the voucher are made in dollars and cents, as it is essential that the exact total of the suppliers' vouchers be entered in our general ledger.

Posting to our subsidiary ledgers, however, is done to the nearest dollar, with the exception of a few accounts of a personal nature. For example, we keep a rather elaborate budgetary control of all administrative traveling and entertainment expenses. These records must be kept to the nearest cent, as they have to match exactly the expense reports submitted by the employees who have been taking trips or entertaining. Our general ledger accounts, however, are posted to the nearest dollar, and as a result we frequently have to write off a dollar or two to P. & L. Sundries at the end of an accounting period to bring the subsidiary ledger and the general ledger into balance.

After vouchers have been costed, they are returned to the accounts payable department, and when a sufficient number have been accumulated, a batch is prepared for posting to the general ledger. An adding-machine list in dollars and cents is attached to each batch of vouchers.

The machine operator now posts to the general ledger to the nearest dollar only (except for personal accounts, payrolls, bank accounts, etc.), and when the

complete batch of vouchers has been posted, a small difference exists between the predetermined adding-machine list and the total accumulated in the posting machine. This difference represents the net variations due to the elimination of cents from the detailed posting, and is posted to a special account in order to maintain general ledger control in total. We call this our Fractional Currency Account and write it off to the P. & L. Sundries at the end of each accounting period.

We found there was a large number of 50-cent items in each batch, and reduced our entry to the fractional currency account materially by adopting the system of increasing the amount to the nearest dollar when the dollars are an even amount, and dropping the 50 cents when the dollars are an odd amount.

All invoices and credit notes going through our accounts receivable are cumulated monthly by tabulating machines in dollars and cents. The monthly posting to the various sales accounts in the general ledger is done in even dollars, and as the accounts receivable control is kept in dollars and cents, there is a write-off to fractional currency.

Sundry cash receipts, such as travelers' floats returned, are credited to the general ledger in even dollars; hence you have fractional currency entries coming from the cash book.

Journal entries between accounts receivable and general ledger are another source of fractional currency, as the accounts receivable portion of the journal entry must be posted in dollars and cents, while the general ledger portion can usually be posted in even dollars.

All in all, one might expect to run up quite a sizable balance in the frac-

tional currency account each quarter, but actually the balance is very small. We have been operating under this system for almost four years. In the first three of these, we wrote off only \$132 to P. & L.

—From an address by F. W. PEART before the Toronto Chapter of the Institute of Internal Auditors.

from our fractional currency account. While we were a little dubious about the whole thing at first, we have now joined the ranks of those who believe that cents-less accounting makes sense.

Also Recommended • • •

PRODUCTIVITY: AN IMPORTANT FUNCTION IN MANAGEMENT. By John W. Roberts. *The Controller* (1 East 42 Street, New York 17, N. Y.), March, 1954. 50 cents. Since the rate of increase in national productivity is by no means commensurate with the rate at which wages have been rising, the author foresees higher production costs and a tight "squeeze" on profits unless management acts decisively to increase output. The solution lies chiefly, he thinks, in increased mechanization, and in getting labor to accept and cooperate with technological change.

RISK, INCORPORATED. *Challenge Magazine* (32 Broadway, New York 4, N. Y.), March, 1954. 20 cents. Describes the activities of several of the dozen venture capital companies which, since 1945, have sought out small, growing businesses in which to invest. By helping to maintain a steady flow of money for capital investment, these companies increase real productive capacity and foster economic growth, the article states.

PUTTING IDLE CASH TO WORK TO EARN ITS OWN KEEP. By Everett J. Mann. *The Journal of Accountancy* (20th and Northampton Streets, Easton, Penna.), May, 1954. 75 cents. The memory of bygone days when cash was less plentiful than now still persists, the author observes, and the average corporation is reluctant to disturb its mounting cash balance. He examines here a number of relatively riskless ways in which management can and should make its idle cash more productive—including U.S. Treasury bills, Treasury Certificates of Indebtedness, and Treasury bonds and notes.

WE ARE WASTING OUR URBAN WEALTH. By Miles L. Colean. *Nation's Business* (U. S. Chamber Building, Washington 6, D. C.), March, 1954. 60 cents. To stop the deterioration of the nation's \$385-billion investment in

buildings, the individual citizen must keep his own property in good condition, watch and help control the "drift" in his neighborhood, and work to give his city a better living and working environment, this article maintains. Halting deterioration of residential and industrial structures and municipal facilities, moreover, will relieve the tax burden placed on other property and will provide a vast market for construction labor, materials, and equipment.

PLANNING AND CONTROL THROUGH BUDGETING. By Frank L. Esposito. *N.A.C.A. Bulletin* (505 Park Avenue, New York 22, N. Y.), March, 1954. 75 cents. This review of the problems connected with installing and operating a budget and the services to be expected from it centers on budgeting as a medium for coordination. As such, budgeting involves both orienting company operations within the framework of managerial planning and maintaining control over internal operations. These goals are differentiated but not separated in this article, which offers specific suggestions on both fixed and flexible budgeting.

SOME OBSERVATIONS ON THE DIRECT COST METHOD. By John B. Inglis. **SOME THOUGHT ON THE "DIRECT COST" METHOD FOR VALUING INVENTORIES.** By A. R. Kassander. *The New York Certified Public Accountant* (The New York State Society of Certified Public Accountants, 677 Fifth Avenue, New York 22, N. Y.), April, 1954. 50 cents. The current widespread interest in the direct cost method of accounting—the philosophy of which runs counter to certain accepted principles of accounting—has prompted these two authors to examine the proposed method and attempt to evaluate its usefulness to the accounting profession. Their conclusion is that there is little likelihood that this new method will accomplish the near-miracles some of its advocates have claimed for it.

Insurance Management

HOW MUCH DO PENSIONS COST?

IN VIEW of the many variables involved in computing pension costs, actuaries and consultants are generally wary about quoting off-hand estimates. However, in a recent talk Robert Tilove, Director of Pensions, Martin E. Segal & Co., presented a series of "rule of thumb" pension cost guides that should be helpful in giving a company some idea of what it can expect to spend on pensions.

Under a \$50-a-month-for-life pension plan, excluding Social Security, the average male employee who retires at 65 will live a little over 14 years and collect a total of \$8,526, Mr. Tilove estimated. The average woman employee who retires at 65 will live about 17 years and collect \$10,260. Unless retirement is compulsory at 65, the average actual retirement age will run about 66. On this basis, the amount the average male employee will collect under a \$50-a-month plan drops to \$8,172.

If the average male employee's pension is fully funded when he retires, the unpaid installments will earn interest. If 2.5 per cent earnings are anticipated, the lump-sum cost at 66 for a \$50-a-month pension will be \$6,628. If the employee enters the plan at age 30, an annual deposit of \$113 a year will be required until the time he reaches 66 to accumulate the \$6,628, if 2.5 per cent interest is earned on the annual deposits.

If no death benefits are provided in case the employee dies prior to retirement, the annual cost per year starting at age 30 drops to \$94. If an allowance is made for those who terminate their

employment prior to 65, and there is no termination benefit, the annual cost is reduced to about \$71.

If an employee enters the plan at age 45 and past service credit is allowed back to age 30, it is necessary to pay about \$1,799, in addition to the future service payments, for the accrued past service liability (from age 30 to 45). If the payment of the \$1,799 unfunded liability for the 45-year-old is paid over 25 years, \$98 will be added to the annual cost in addition to the future cost. If interest only is paid on the past service liability, the additional annual cost is \$45.

If the age average of the group is around 42, a contribution of \$100 a year for each employee, based on 25 years of service and made in good years as well as bad, will result in a monthly pension of about \$40, with proportionate benefits payable to those with 15 or more years of service. If the annual contribution is raised to \$125 a year, the pension benefit for a 25-year man can be increased to \$50 a month. If the annual contribution is \$150, the pension benefit, based on 25 years of service, can be raised to \$60 a month. These monthly benefits are exclusive of Social Security.

For every year the retirement age is pushed back, costs of pensions are reduced 7 to 10 per cent. Thus the savings under a plan where the actual retirement age averages 68 will run from 21 per cent to 30 per cent of the cost of a plan where the average actual retirement age is 65.

With respect to the effect of higher

investment yields on pension costs, it was pointed out that benefits can be increased 20 per cent for each full percentage point of increased yield. For example, if the yield is increased from 2.5 per cent to 2.75 per cent, a .25 per cent increase, 5 per cent higher benefits can be paid.

The expense margin on plans of 100 or more employees may be shaved, but the actual cost variation on this factor is insignificant. Even if a fund or plan is badly mismanaged, it is doubtful that the resultant increase in cost will be more than 10 per cent. For example, on plans with 5,000 or more employees the expense factor will not run more than 5 per cent. The size of the group is not as much of a factor affecting costs as is the age distribution.

The actual retirement age, however, does have a strong influence on costs. This age, unless there is compulsory retirement, will tend to vary with the type

of work. Where the work tends to be light, the average retirement age may be as late as 68. On the other hand, where the work takes considerable physical energy, the average retirement age will be close to 65.

Generally, the benefits provided and the age of the people covered are the major factors governing pension costs. The service requirement, eligibility rules, and the number of women in the plan also affect costs. However, the higher turnover among women employees tends to offset the cost of their greater longevity.

In estimating pension costs, it is important to base comparisons on the same mortality tables, since costs can vary as much as 20 per cent to 30 per cent, depending upon the mortality table on which they are based. One way to find out whether mortality assumptions are accurate is to check mortality experience under a previously adopted group life insurance plan.

HOSPITAL BENEFITS FOR RETIRED EMPLOYEES

LAST YEAR the major automobile companies agreed to make deductions from pensioners' checks for the purpose of paying premiums for hospital and surgical benefits for the retiree and his dependents. More recently, a major rubber company "picked up the check" on limited hospital benefits for its retired employees.

These developments, arising out of labor negotiations, suggest that studies will be accelerated to develop methods of providing coverage of this kind for retired persons over 65, only 21 per cent of whom now have any form of prepaid hospital insurance.

Some companies have provided benefits

for retired employees for the past several years. Their experience, although not conclusive, indicates that the cost of medical care for retired employees is about two and one-half to three times the cost for active employees; both the frequency and duration of hospital confinement appear to be greater. Moreover, the aggregate cost over future years for the retired group will tend to mount, in some cases rather sharply, as the number of retired employees increases.

Among the many different approaches to the problem now utilized by different employers are the following:

1. *Offering the retired employee the*

right to purchase an individual policy. The individual policy usually has limitations (such as failure to cover pre-existing conditions) that reduce its value. Moreover, rates for such coverage are higher than the average retired employee can afford.

2. *The continuation of benefits in effect before retirement at:*

a) A special rate for the retired employee, based on the presumed cost for employees in that age group. Again, this cost may be higher than the average retired employee can afford to pay.

b) The regular rate for active employees. The cost to the retired employee is more reasonable, but either the employer or active employees, or both, must absorb the difference between this cost and the actual cost, assuming the cost of the benefits for retired employees to be higher than for the active employee.

3. *Continuation of the same coverage provided for active employees, but limited to one payment of the maximum benefits provided.*

4. *A dollar limitation on the amount of benefits provided during the entire period of retirement.* The retired employee can apply any medical expenses against the limitation at any time. This plan fails to recognize the fact that medical expenses for some retired employees may far exceed the maximum, whereas for others they will be far less than the maximum.

5. *A dollar limitation on the amount of benefit provided in a single year.* Administratively, this may introduce the complication of applying excesses in one year against credits accrued but not used in previous years. It also tends to exert

pressures for acceleration of the use of future credits. It tends to approximate No. 4, with a less definite maximum.

6. *Offset the cost of medical care against death benefit.* This method presumes that a stipulated amount of death benefit is provided, and the employee may elect to have medical expenses charged against his death benefit. From a cost standpoint, this is an attempt to mix oil and water. It approximates No. 4 in that it provides a maximum dollar limitation on both death and medical care. It does not reduce the cost for retired employees who do not require medical care.

Regardless of the method used, the provision of medical care for retired employees constitutes an additional cost for the employer, the active employees, the retired employees, or all three. Where the cost falls will depend on the amount of benefits, the basis of defining cost, and the method of paying the benefits. Some of the methods will have a greater effect upon cost than others; each should be studied carefully as to its effect upon the company, employees, and community.

Perhaps the question of *who* pays the cost is less material than *when* the cost is paid. If some method could be devised whereby this cost could be paid in advance during the working years and could represent compensation for work performed, whether paid by the employer or by the employee, then it would reduce in the future the otherwise mounting load of unproductive charges against future production.

Obviously, this warrants continued study by employers and employees. For medical care is certain to be increasingly recognized as an important part of the entire problem of retirement.

—For Your Information (Edwin Shields Hewitt and Associates, Libertyville, Ill.), March-April, 1954, p. 2:3.

Pensions, Productivity, and Stability

GIVEN A parallel boost in productivity of machinery and labor, the adoption of pension plans by business and other institutions can be a powerful force in stabilizing the American economy. Without that boost, however, Dr. Marcus Nadler, consultant economist of The Hanover Bank and professor of finance at New York University, recently told the convention of the National Association of Bank Auditors and Comptrollers, this growth of pension plans could lead to a lower standard of living.

Pensions represent, he pointed out, a fixed income. As the number of pensioners grows, the number of people interested in maintaining the stability of the purchasing power of the dollar will grow.

The pensioner, he stated, will be willing to join others who live on a fixed income to fight inflationary schemes that may be proposed, thereby contributing to economic stability. In addition, the widespread adoption of pensions has added to the growth of institutional savings—which assure, as Dr. Nadler sees it, a steady flow of capital to American business.

—The Controller 3/54

Also Recommended • • •

UNIFORMITY IN BUSINESS PROTECTION. By Urban M. Lelli. *The Casualty and Surety Journal* (60 John Street, New York 38, N. Y.), May, 1954. \$1.50 per year. As of last April, new uniform coverage requirements were announced for an Accountants Receivable policy and a Valuable Papers and Records policy. These were jointly developed by casualty insurance companies and inland marine underwriters to promulgate uniform coverages, manual rules and rates on a country-wide basis. The major features of the new policies are described here.

IT MIGHT HAVE BEEN. By Eugene F. Gallagher. *Best's Fire and Casualty News* (75 Fulton Street, New York 38, N. Y.), March, 1954. 50 cents. The insurance buyer benefits no one—least of all his own organization—by attempting to “spread” his business among a number of agents, the author asserts. Also considered in this article are certain loss problems, such as that of the tax treatment accorded a loss adjustment which exceeds the book value or “tax basis” (and hence the maximum casualty loss deduction) of insured property which has been destroyed by fire.

THE NEW WORKMEN'S COMPENSATION AND EMPLOYERS' LIABILITY POLICY. By R. V. Alger. *The National Insurance Buyer* (National Insurance Buyers Association, Inc., Hotel Martinique, 32 Street and Broadway, New York 1, N. Y.), March-April, 1954. Gratis. Ex-

amining the growing need for supplemental coverages and the consequent development of several types of endorsement to the employers' liability section of the standard workmen's compensation policy, the author also describes some features of the revised policy currently being worked out by the National Council of Compensation Insurance. It is planned, for example, to provide coverage for all operations within the states where the insured conducts operations by specifying such states in a declaration and eliminating the statutory citations used in the present state endorsements.

MULTIPLE LINE INSURANCE AND ITS VALUE TO THE INSURING PUBLIC. By Roy C. McCullough. *The National Insurance Buyer* (National Insurance Buyers Association, Inc., Hotel Martinique, 32 Street and Broadway, New York 1, N. Y.), March-April, 1954. Gratis. In this article, a leading proponent of the multiple-line concept outlines the advantages of the indivisible-premium type of contract, which provides coverage for several perils without specifying the charge for each separate coverage. This concept, which has already gained some acceptance in the form of the so-called manufacturer's output policy, can mean real economies for insureds, the author asserts, since usually a package contract can be sold profitably at a price lower than the sum of the price of its component coverages.

Special Feature

ESSENTIALS OF SUCCESSFUL PENSION PLANNING

Employee pensions cost American industry well over \$2 billion annually, it has been estimated, and collective bargaining is spurring the expansion of benefits. Furthermore, the cost of individual company programs is rising—as a result of inflation and increased longevity—and this has made more urgent the problems of planning, administration, and reducing costs. Careful employers will want to scrutinize both existing and proposed pension plans systematically, to make sure they are efficient, flexible and economical. The following papers, from AMA's recent Special Conference on Employee Group Benefits, will provide helpful guidance not only to companies about to launch a pension plan but to those reviewing their present programs.

I. BASIC GUIDES AND CRITERIA

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IN PENSION PLANNING—the most expensive of all insurance fields—the responsibilities of the insurance manager are by no means ended when he selects a carrier to write the contract supporting the pension program, if the program is to be insured, or approves the trust indenture, if the program is to be trustee. He must make certain that his pension plan is actuarially sound, nondiscriminatory within the meaning of the Internal Revenue Code, and tailored to the financial ability of his company to pay the total cost of providing the stated benefits. He must also see that his management is currently informed of the effect new labor legislation will have upon the ultimate cost of the plan; keep management advised as to whether his plan's provisions compare favorably with those

of competitive companies within his own industry; supply accurate and actuarially sound cost estimates of proposed benefit improvements to the personnel or industrial relations department from time to time for use in negotiations with labor unions; and satisfy himself that the assumptions on which such costs are predicated are fairly and accurately stated. Finally, he must be sure that the records maintained in administering the pension program are adequate, reliable, and capable of prompt, accurate interpretation.

How is he to discharge these multifaceted responsibilities? It would appear that he should begin by critically examining the benefit, contribution, and funding provisions of the existing program, if any, to determine whether it is accom-

plishing the purpose for which it was originally adopted—that is, financing the retirement of superannuated employees. Modifications of a plan—or a completely new program—will of course be gauged by the same criteria.

A VARIETY OF FORMULAS

For the most part, employers have in the past attempted to provide their superannuated employees with a retirement income equal to approximately 50 per cent of their terminal income. In many cases, pension programs that were adopted several years ago now fall short of this ideal objective. This does not mean that the fundamentals have changed, because pension plans in themselves are not new, nor have the basic actuarial and underwriting theories underlying the writing of pension plans changed since the turn of the century. However, the application of these basic theories has been complicated by the changing provisions of Social Security, the Taft-Hartley Act, other federal and state legislation, and the regulations of such agencies as the Bureau of Internal Revenue. Thus the modern insurance manager must constantly re-evaluate his pension program in the light of these changes, as well as in the light of a changing economy, if it is to do today what it was designed to do originally.

A variety of pension plans have been designed to accomplish the ideal of providing superannuated employees with a retirement income equal to approximately 50 per cent of their terminal earnings. Some have based the retirement income on a percentage of current earnings; some are integrated with Social Security; and some exclude Social Security benefits. Since it is difficult to determine in a changing economy the exact percentage of career-average earnings that will produce

a retirement income equal to 50 per cent of terminal earnings, it has been the custom to follow a rule of thumb which, in effect, states that it takes 70 per cent of career-average earnings to produce 50 per cent of final earnings. This rule of thumb was developed prior to the inflationary spiral which we are experiencing (or have experienced), and whether we can continue to use it in today's economy is—to say the least—a subject for conjecture.

Career-Earnings Methods. If an annuity plan utilizes what is commonly referred to as the career-earnings base, our rule of thumb is applied by first determining how long individual employees have, on the basis of past experience, remained in the service of the company. Once this has been determined, a simple division into the 70 per cent will give the percentage of annuity benefits that should be accrued under this type of program for each year of service. The accrual of this percentage each year will of course be equal to 70 per cent of career-average earnings, which, in turn, will give us our 50 per cent of final earnings.

The Integrated Annuity. Relatively few pension programs which are in operation at the present time provide retirement benefits for each year of service in excess of 2 per cent. In most instances, these so-called 2 per cent annuity plans are integrated with Social Security—which means, naturally, that 2 per cent of the average annual earnings is credited only for those amounts of annual salary that exceed \$3,600. The amount of annuity benefit earned on the salary below \$3,600 is therefore adjusted by the employer to take into account the Social Security benefits that will be received by the employee in a covered occupation. In other words, the usual type of benefit formula

in use in many companies provides for the accrual of annuity benefits each year equal to 1 per cent of the first \$1,200 of salary, 1½ per cent of the next \$2,400, and 2 per cent of that portion of the annual salary in excess of \$3,600. These programs are usually referred to as integrated-annuity plans.

Terminal-Earnings-Type Plan. Among other systems designed to provide the so-called ideal retirement income is the terminal-earnings type of annuity plan. This, as its name implies, provides a retirement income based on the average earnings of the employee during his final 5 or 10 years or, occasionally, his highest-paid 5 or 10 years. The amount of retirement income at normal retirement date is determined as a certain percentage of this figure for each year during which he has participated in the retirement program. A terminal-earnings program usually limits the amount of retirement income an individual may receive to a certain percentage of this terminal-salary base, which, in some instances, may exceed 50 per cent.

Combination Program. Some pension plans combine the terminal-earnings type of annuity program with the so-called career-average plan; that is, they use the terminal-earnings type of annuity program as a minimum under the career-average plan. Such an arrangement gives the employee, at retirement, an income equal to the annuity credits accrued under the career-average plan or the annuity credits granted by the application of the terminal-earnings formula, whichever is higher. This combination-type program has the effect of providing an income which is more adequately adjusted to the economic cycle at the time of retirement.

Years-of-Service-Base Plan. Other plans

have been designed to provide the annuitant with a flat amount of retirement benefit regardless of career-average income or terminal earnings. The amount of benefit he receives is payable for each year of participation in the plan. Such years-of-service-base plans, as they are called, are now in effect in the steel, coal, and automobile industries.

Equity Annuity Benefit Plan. Several years ago a new type of retirement-benefit plan, referred to in the literature as the Equity Annuity Benefit Plan, was evolved. Under this arrangement, annuity benefits are provided as a variable number of dollars which will depend in amount on the value of the participating employee's share in a common-stock portfolio. A variation of this type is the College Retirement Equities Fund, more familiarly referred to as the Teachers Annuity Plan, under which an educational institution and its staff members may choose to invest part of their combined contribution (annuity premiums) in common stocks and other securities. Not more than 50 per cent of the total contribution made by employee and employer together may be applied to the equities fund, the rest being used to purchase annuity credits through an insurance carrier.

The amount of an individual's retirement income for that portion of his and the employer's contribution that is placed in the equities fund will be defined in terms of shares in the fund or units of benefit, rather than dollars of retirement income. The actual dollar value of a unit of benefit will be determined periodically, so that benefits received from this portion of the plan, if elected, may vary from year to year depending upon the value of the assets of the fund. The

amount of an individual's retirement income for that portion of his and the employer's contribution that is used to purchase annuity credits through an insurance carrier will, for each year of participation in the plan, depend upon his age and amount of annual earnings.

CONTRIBUTORY OR NONCONTRIBUTORY?

The next step to be taken in the analysis of an existing program or a proposed new one is to weigh the relative merits of contributory and noncontributory plans. The question of employee contribution is important because of its influence on the cost of the pension program; moreover, industrial relations experts agree that it has a significant effect upon employees' acceptance of, and participation in, the program, since it not only makes them partners in the venture but also establishes a medium of forced savings regardless of whether or not they continue with it to retirement date.

In general, under a contributory plan, employees invest approximately 3 to 5 per cent of their earnings in the pension program. One way of measuring the extent to which the employees contribute to the cost of the program is to determine the amount of annuity received for each employee dollar. Probably the contributory plans which are most generous (from the company's standpoint) provide the employee with \$1.00 of annuity benefit for each \$1.75 which he contributes. In contrast, this ratio may, in certain types of plans, rise as high as \$3.00 to \$3.50 of employee contribution for each \$1.00 of benefit.

Another matter of importance is the matter of how and to what extent the employee's and the employer's contribution to the plan should be vested. And, with a noncontributory plan, considera-

tion must also be given to the desirability of vesting, after specified years of service, the annuity credits which have accrued.

An unusual vesting arrangement is embodied in the Toledo Plan, which, in common with most other multi-employer plans, guarantees that the employee will not lose his pension in the event that he transfers his affiliation from one employer-participant to another. There are, of course, several types of multi-employer pension plans, most of them operating within one industry. The Toledo area pension plan is different in that it covers a variety of companies in many industries. Only two stipulations are made: (1) the company must be located in the Toledo metropolitan area; and (2) its workers must be represented by the UAW-CIO. Not all the participating employers, however, are engaged directly or even indirectly in the automobile business; some make paint and varnish, some operate hardware stores, and others sell box lunches.

Although it has been accepted by industry only in a limited geographic area, this is a plan with which every insurance manager should familiarize himself, since a general application of the underlying theory would have a direct and important influence upon the vesting provisions of all pension programs.

THE FINANCIAL BURDEN

In pension-plan analysis, the insurance manager will also give careful consideration to such factors as eligibility requirements, the pros and cons of compulsory retirement, and the form of annuity under which it is proposed to pay benefits. These elements of pension planning are important not only in maintaining a program best suited to the requirements of superannuated employees but also in

determining the type of pension program that the company can safely finance.

Indeed, after examining the various types of plans with the retiree's needs in mind, it may be well to consider the employer's viewpoint. After all, whatever the employee's contributions, it is the employer who must pay the major portion of the cost of maintaining a pension program. To be sure, it is not likely that the company will be bankrupted by the enlargement of benefit provisions, but one of the biggest problems with which management is concerned today is the question of how much of the profit dollar can be expended to provide additional benefits in pension programs.

Those in charge of the insurance program, therefore, must be in a position not only to keep top management informed as to the current cost of maintaining the pension plan, but to advise both top management and those departments of the organization which negotiate with labor unions of the true cost of proposed increases in pension benefits. Not that the modern insurance manager must be a combination of insurance lawyer, actuary, and underwriter. He should, however, be aware of the need for and the proper use of the technical skills of each of these men in connection with current and potential pension-plan costs.

Since the majority of companies, owing to size or geographic location, cannot justify the establishment of a completely integrated insurance department, where a life actuary, an underwriter, and an insurance lawyer are available on the company payroll, the services of these technicians must be acquired from outside—for only an accurate determination of costs will enable management to weigh the merits of providing a particular type of benefit.

The manner in which these services are obtained is immaterial. A professional consultant can be engaged, or an insurance company representative can be asked to submit cost estimates for a proposed plan. In either case, once having chosen such a technician, the insurance manager must be willing to confide in him as in a doctor. He can serve the company to his fullest capacity only if he is given all the information he requires in order to make his evaluations. No doubt this will entail the releasing of information which might be termed confidential. It is, however, of paramount importance that the outside consultant at least be furnished with the following data for each participant in the group to be covered: (1) birth date, (2) sex, (3) service date (if the benefits are to be related to years of service), and (4) annual earnings (if the benefits are to be related to earnings).

To quote from an AFL pamphlet entitled *Pension Plans Under Collective Bargaining*:

Cost determination is probably the most difficult single question involved in the establishment of a pension plan. Only a reliable actuary is qualified to make a firm estimate as to how much a given level of benefits for a particular group of workers may cost—or how much in the way of benefits a given level of contributions can safely provide. . . .

While the union negotiator should not undertake the functions of an actuary, he should know something about the principles upon which cost estimates are based, so as to be able to make intelligent use of these figures at the bargaining table, and in the administration of the plan.

This sums up perfectly the need for being able to present pension-plan costs intelligently and provide the company negotiator with enough basic information that he can be adequately prepared for his dealings with the unions.

II. METHODS OF FUNDING COMPARED

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WHAT IS THE BEST method of funding a pension program? Whenever we raise this issue, we immediately enter an area in which there can be no single, unequivocal answer. The question of whether a particular method is best falls into the same category as the question: Is this a good life insurance policy? In both cases, the answer is the same: A life insurance policy is good only if it is good for the man who purchases it. A particular method of funding is best only if it best suits the individual company which is purchasing the program.

Basically, all methods of funding a pension program are actuarially equivalent at a given time, and what makes a method of funding good for a company depends upon the manner in which that company, as the purchaser, wishes to pay the cost of the benefits to be provided.

COST DETERMINATION

The ultimate objective of the funding procedure, under any type of pension plan, is to accumulate enough money to make monthly payments to annuitants in accordance with the terms of that plan. Since it is common practice to fix the retirement age at 65, we first ask: *How much money must we have accumulated by the time an annuitant reaches age 65 to pay his pension as long as he lives?*

The cost of a pension at age 65 is composed of three principal elements: (1) mortality, (2) expenses, and (3) a credit in the form of interest on the fund from age 65 till death.

1. The use of a mortality table—that

is, the application of the laws of probability to certain restricted statistics—is the only way in which we can estimate how long an individual will survive after age 65, which in turn tells us how many annuity payments we must provide for him. We must, of course, adopt a recognized table—recognized in the sense that it is acceptable to the Bureau of Internal Revenue—and, if the experience of our particular group should deviate from that which is anticipated by the table, this deviation will be reflected in the form of dividends, if our contract is insured, or as mortality gains or losses if it is trustee.

2. The expense involved in actually making the payments to the annuitant must also enter into the price of our pension at age 65. However, such expense is, in the final analysis, a relatively negligible portion of the total cost of the annuity.

3. The money that we accumulate to pay for the annuity at age 65 earns interest in amounts which vary naturally, depending upon where the money is deposited and how it is then invested. Even as annuity payments are made, the remainder of the money that we have deposited continues to earn interest. The composite of these two—the money we have actually deposited and the interest earned on this money—is the source from which annuities are paid until the death of the annuitant.

We now come to our second problem: *Once having determined how much we will need at age 65, how much must we set aside at the present time in order to accumulate the required amount?* Were

CHART I

Tax Considerations Affecting the Company Retirement Plan

TYPE OF PLAN	WHEN CAN DEDUCTIONS BE MADE	HOW MUCH CAN BE DEDUCTED?	WHEN MUST EMPLOYEE REPORT INCOME?	HOW MUCH MUST EMPLOYEE REPORT?
Pension trust	Taxable year in which payment is made. Provision made for accrual. Carry-over permitted	Amount equal to 5 per cent of participating employee's salary, plus additional amount necessary to cover past and current service credits. Certain limitations on past service costs	In year distributed or made available to him	Total amount, except in case of contributory plan. Then taxable income is limited to 3 per cent of employee's cost until cost has been recovered. Full amount taxable thereafter
Retirement annuity	Generally the same as for pension trust	Generally the same as above	Same as above	Same as above
Unqualified plan—employee's rights non-forfeitable	Same as above	Only to the extent that contribution is reasonable additional compensation. Limited to the extent that payments represent nonforfeitable rights to employees	In the year the contribution to the plan was made by the employer	Full amount of contribution applicable to employee
Unqualified plan—employee's rights forfeitable	Only when benefits are actually paid to employees	Only to the extent that contribution represents necessary and reasonable business expense	In the year received	Full amount received

it not for the elements of mortality, severance, and interest, all we would have to do would be to multiply the sum of money needed at age 65 by the number of people covered by our plan as of any particular date and set aside the indicated amount. But there are employees presently on the payroll who will not attain age 65 in the company's employ; some will have died, and others will have resigned or been dismissed.

If we were to assume that one out of every 10 employees currently on the payroll will die before age 65 and we will therefore have to provide benefits for only nine out of every 10 employees, we would be, in effect, discounting for mortality. Similarly, if we were to assume that out of these nine employees who reach age 65, only five will still be with our company at age 65, we would be discounting for severance.

The theory, then, is simple. The application is more complicated, since it is a well-known fact that rates of mortality vary by ages and that rates of severance vary by ages and years of service. In any case, the net effect of these two discounts, by whatever means applied, will tell us at the present time how many people we must expect to pension at age 65.

Third, and probably the most important, is the discount applied for interest. If, as we have determined, it is necessary to provide benefits for only five out of every 10 employees who are currently participating in our retirement program, we must set aside at the present time an amount of money which will be equivalent to five times the cost of providing a pension benefit for one individual at age 65. We have now reduced our problem to a simple problem in interest

theory. It is merely necessary to determine what sum will grow, at an assumed interest rate, to the amount of money that we require.

The net effect of these discounts will indicate at the present time the total amount of money we will have to put aside to pay for all the benefits of all the employees in our present workforce.

SYSTEM OF PAYMENT

We have now arrived at a dollar cost which we refer to as the initial lump-sum liability. This we can put aside in its entirety; and, if our fund earns exactly as much interest as we have anticipated, if exactly as many people die and exactly as many people withdraw from the company's employ as we have anticipated, it will be sufficient to pay for the entire cost of our pension program.

Under the credit systems available to the average consumer in today's economy, there are a variety of ways in which he may pay for a major item such as an automobile. He may pay the entire cost of the car at the time of purchase, or he may make a down payment and finance the balance over a period of months or years. In some instances, he may pay the entire cost of the car in equal monthly or annual installments without a down payment, and in still others he may sign a note on the car, pay nothing for a specified number of months or years (possibly with the exception of interest charges), and then pay the full cost.

To what extent is the problem of paying for an automobile analogous to paying the cost of a pension program? It is true that the initial lump-sum liability, in many instances, consists of two elements: (1) the cost of past service credits and (2) what is referred to as the future

CHART II
A Summary of Pension-Funding Vehicles

FUNDING VEHICLE	MANNER OF FUNDING	MORTALITY	TURNOVER	BENEFITS ON SEVERANCE OF EMPLOYMENT
Group annuity contract	Single-premium deferred annuities purchased each year to cover retirement benefit for each year's service	Discounted in advance	Not discounted in advance	Employee contributions returned as paid-up deferred annuity or in cash with or without interest. Employer contributions in cash, less surrender charge if not vested; if vested employer contributions remain for benefit of employee
Deposit administration contract	Contributions placed with insurance company in undivided account until single-premium annuity is purchased at retirement or vested termination	Same as above	Optional to discount in advance	Same as above, but with no surrender charge on returns of employer contribution in cash
A. Advance funding type				
B. Terminal funding type	No contributions placed with insurance company in advance of retirement or vested termination when single-premium annuity is purchased. Trust fund often used for employee contributions prior to retirement	No discount before retirement	No discount before retirement	Employee contributions returned
Individual policy	Separate contract of life, endowment, or a combination thereof purchased for each covered employee	Not discounted in advance	Not discounted in advance	Employee contributions returned, depending on vesting provisions
Trusted plan	Actuarially determined deposits made to trust fund. Benefits at retirement paid directly from trust fund or purchased from insurance carrier	Discounted in advance	Optional to discount in advance	Employee contributions always returned, depending on vesting provision
Pay-as-you-go plan	Benefits at retirement paid directly out of company income. No advance funding	Not discounted in advance	Not discounted in advance	Employee contributions always returned

service or normal cost. Under certain types of programs it is not possible to determine the future service or normal cost as an initial lump-sum liability, though generally, where a plan is inaugurated after a corporation has been in operation for a period of years, the past service liability is exactly determinable as of the date of inception of the plan or any other later date. In this respect only does our initial lump-sum liability differ from the purchase price of our automobile.

Payment of Single Premium. Comparable to the buyer who pays the full price of his automobile at the time of purchase is the company which purchases a group annuity contract and pays premiums to an insurance carrier. This method is known as the single-premium method of funding. Under group annuity contracts the company pays the entire cost of each unit of pension benefit purchased each year. The only difference between the single-premium method of funding, as used in the group annuity vehicle, and paying the entire price of our automobile in cash is that under the group annuity contract we pay for only a portion of the total annuity that any individual may accrue at age 65. Our payments each year under a group annuity contract completely fund or completely pay the amount of annuity credits that have been purchased to date. Thus the way in which we pay for our annuity credits under a group annuity contract is analogous to paying for parts of our automobile individually—in other words, paying for a wheel at a time.

Entry-Age-Normal System. Instead of paying the full cost, however, it is possible to make a down payment on the cost of our pension plan and defray the balance over a period of years. This is,

in effect, what is commonly done under the so-called entry-age-normal method of funding. The down payment is, of course, analogous to the amortization of past service credits. The only difference is that under the entry-age-normal method of funding the amortization of this past service liability is usually spread over a period of 10 to 30 years.

Level-Premium and Aggregate Methods. The pension buyer may also defray the cost of his pension program as does the consumer who pays for his automobile in installments over a number of months or years. This buyer will be utilizing the level-premium method of funding if the payments to defray the cost of his pension program are equal installments, payable either annually or monthly. However, if the payments are spread as a level percentage of payroll, he will be utilizing the aggregate method of funding, which is a slight modification of the level-premium method.

Terminal (Pay-as-you-go) Funding. Finally, the pension buyer may pay the cost of the benefits in a lump sum at the time an individual retires. In this case, he will be practicing what is known as the terminal-funding method, often referred to as the pay-as-you-go method.

The choice of method will be dependent upon a number of factors: One, obviously, is financial ability to make the payments. Another, equally important, is the consideration that must be given to Bureau of Internal Revenue regulations as they affect the plan (see Chart I). In any case, as with the purchase of our automobile, the longer the buyer postpones full payment, the greater his dollar outlay will be.

SELECTION OF VEHICLE

How do we determine which of the various vehicles of funding—group an-

nuity contracts, deposit administration contracts, other insured contracts, trust funds—will best suit our purposes? The merits of one vehicle of funding over another are primarily contingent upon the wishes of the individual purchaser or company. However, the type of pension plan does in some instances dictate the type of funding vehicle that must be used.

In this discussion, we have concerned ourselves with the type of annuity plan under which it is possible to determine in advance the amount of annuity benefit that will be available to the annuitant at age 65. As stated, those programs which are based on current earnings or length of service provide for the active employee a certain unit of retirement benefit for each year of active participation in the plan. This form of annuity plan can be funded by means of all the various forms of group annuity and deposit administration contracts, as well as a trust-fund vehicle.

However, annuity plans under which the exact amount of the retirement benefit is not known until the completion of service with the company do not lend themselves readily to funding in group annuity contracts. These are the plans which base benefits upon the final five or 10-year average salary, or the highest five or 10 years of earnings during the employee's career, or which pay a stipulated amount exclusive of Social Security. Plans of this type are more advantageously funded in deposit administration contracts and trust funds—since, of course,

where a specific unit of annuity benefit is not accrued for each year of service, it is not to the advantage of the employer to purchase an annuity whose amount cannot be finally determined until the employee reaches age 65.

Another category of pension plans under which the funding vehicle is comparatively restricted includes those which combine the annuity benefit with a life insurance death benefit, prior to age 65, that exceeds the amount of the employee contributions. This type of plan, which is more common among companies with a comparatively small number of employees, is most advantageously funded through the medium of the group permanent insurance contract or the retirement endowment annuity type of contract which provides for a death benefit in \$1,000 units or the reserve, whichever is greater; and, if the insured should live until age 65, also provides an annuity of \$10 a month for each \$1,000 of insurance coverage.

To repeat, the choice of a vehicle of funding is not at all times entirely dependent on the cost of the company program under each of the various vehicles. The type of plan adopted in many instances dictates the type of vehicle to be used; and, in addition, it is necessary to take into account such considerations as industrial relations, the composition of the workforce, and the company's financial situation, any or all of which may indicate a need for flexibility that may, in the end, be the determining factor in this important decision.

SELF-INSURANCE PAYS OFF: The Upjohn Company discovered that a self-insurance plan to provide auto collision insurance for salesmen cost only \$59,000 as against \$137,000 over a two-year period—the cost of their former method.

—*Drug Trade News* 2/15/54

III. THE DECISION AND ITS IMPLEMENTATION

C. HENRY AUSTIN

THUS FAR we have discussed the need for evaluating the goals of the company pension plan; we have described in a general way the various types of benefit plans that can be modified or tailored to accomplish these goals; we have strongly urged the use of the professional skills of the insurance lawyer, the actuary, and the underwriter; and we have expounded some of the fundamentals of pension plan funding, including the elements of cost determination, the various methods of payment, and the factors that enter into the choice of the funding vehicle.

Now that we have our basic information, and have laid out our plan for consideration, we are faced with the problem of evaluation—and of framing a concrete proposal which can be submitted to top management for action.

COMPARISON AND EVALUATION

Our first step is to review the benefits afforded under the existing or proposed pension plan and set them up in a form that will permit us to compare them with those provided by other companies in our industry, so that we will know how we stand on a comparative basis with our competitors.

We are now in a position to request our insurance carrier, if our plan is insured, to furnish us with the dollar amounts of (a) the contract reserve and (b) the contingency reserves that have been established or are being proposed by the carrier. In addition, a history of the dividend payments, if any, during the life of an existing contract should be provided.

When we have assembled these comparative data, we are in a position to use the technical skills of the insurance lawyer, actuary, and underwriter. Using the information we have supplied, they should be able to advise us as to whether our program is—

1. Actuarially sound.
2. Set up in such a way that we can take deductions afforded by the Bureau of Internal Revenue regulations.
3. Properly integrated with the provisions of the Social Security and Taft-Hartley laws.

If our plan is trusted, rather than insured, professional consultants should be given all possible assistance in making a similar analysis. In either case, vehicles of funding can then be recommended which will most nearly conform with the requirements of our company—vehicles which will be best suited to its ability to pay for the benefits offered by our present plan or for contemplated improvements. (See Chart II for a summary of funding vehicles and the pertinent facts about each category.)

By following such a procedure, we can put top management in a position to decide what course of action to adopt.

RESPONSIBILITY FOR ADMINISTRATION

Finally, before tying together the completed package, we must give careful consideration to the problems incident to administering the plan.

It has been possible, in these few pages, only to highlight the fundamentals with

Checklist for Analyzing Pension Plans

- A. What are our reasons for wanting a plan or wanting to improve the plan we have?
- B. What are the basic considerations to be kept in mind at all points along the line?
 - 1. How much do we have to give?
 - 2. How much do we want to give?
 - 3. How much can we afford to pay?
 - 4. Should we institute or increase pension benefits at this time, or should the money be spent on some other employee-benefit plan?
 - 5. Are the provisions of our pension plan competitive with plans of other companies in the same industry or of comparable size and geographic spread?
- C. What outside agencies might we use?
 - 1. Legal firm.
 - 2. Consulting actuary.
- D. Eligibility requirements.
- E. Retirement requirements.
 - 1. Normal retirement.
 - 2. Early retirement.
 - 3. Disability retirement.
 - 4. Deferred retirement.
- F. Schedule of benefits.
 - 1. Flat amount.
 - 2. Money-purchase plan.
 - 3. Career-earnings base.
 - 4. Terminal-earnings base.
 - 5. Years-of-service base.
 - 6. Current-service versus past-service credits.
 - 7. Social Security excess or offset plans.
 - 8. Minimum benefits supplied under alternative formulae.
 - 9. Equity pension benefits.
- G. Employee contributions, if any.
- H. Vesting.
 - 1. Employee money—allow interest or not?
 - 2. Employer money.
 - a. Any type of retirement—normally full vesting.
 - b. Termination of employment.
 - (1) Lump sum.
 - (2) Income over period of years following termination.
 - (3) Annuity payments deferred to retirement date.
 - (4) Contingent requirement, such as requiring severed employee not to withdraw his contributions.

Checklist for Analyzing Pension Plans (Cont'd)

- I. Type of annuity.
 - 1. Straight life.
 - 2. Certain and life thereafter—5, 10, 15, or 20 years.
 - 3. Installment refund.
 - 4. Cash refund.
 - 5. Modified cash refund.
 - 6. Joint and survivor.
- J. Funding the plan.
 - 1. Time for funding.
 - 2. Vehicles for advance funding of the plan.
 - 3. Factors considered in the computation of a pension liability—gross costs (see Chart II).
 - 4. Funding different elements of the retirement benefit.
- K. Legal aspects of the plan and qualifying payments for tax-deduction purposes—basic considerations.
- L. Provisions of the trust instrument.
- M. Provisions of the annuity contract.
- N. Participating or nonparticipating insured contract.
- O. Cost analysis—net costs.
 - 1. Trusteed plans.
 - a. Mortality—actual compared with expected.
 - b. Interest, capital gains and losses, and valuation of assets.
 - c. Expenses—trustee, actuary, and company's own.
 - d. Turnover—actual compared with expected.
 - e. Future changes in earnings levels.
 - 2. Insured plans.
 - a. Investment income.
 - b. Expenses.
 - c. Annuity and death payments.
 - d. Employer refunds resulting from termination of employment.
 - e. Mortality credits or charges.
 - f. Information concerning reserves set up under the plan.
 - g. Dividends.
- P. Publicizing the plan.
 - 1. Employee must understand basic provisions of pension plan.
 - 2. Program must be established to prepare the older employee for retirement.
- Q. Administration of the plan.

which we must familiarize ourselves if we are to deal adequately with the company pension plan. The checklist on pages 478-479 will, it is hoped, serve as a further guide to the orderly consideration of the pension-planning problem—beginning with the basic questions each company must ask itself, and proceeding through the details of eligibility, the rules governing retirement, the schedule of benefits, and the development of a sound, well-thought-out program, designed to assure those benefits, to the implementation of the program and the need for publicizing it adequately and preparing older employees for retirement.

It will readily be agreed that the best-planned pension program may lose its effectiveness if it is administered by departments or individuals who are not familiar with the fundamentals upon which pension plans are based or who are unable to interpret contract-supporting employee plans in accordance with the customs and terms peculiar to the insurance industry. Therefore, it would seem

highly important to the successful operation of a pension program that its administration be entrusted to the department which is responsible for the actuarial evaluation of the plan; which negotiates the underwriting of proposed changes in the insurance contract supporting the pension program; which interprets the plan's various provisions for the industrial relations or personnel staff who sell and publicize it; and which furnishes cost calculations to the company representatives who negotiate proposed improvements with labor union representatives.

All this adds up to a heavy responsibility for the man in charge of the insurance function. Indeed, on the responsibility of this individual (whatever his title) to interpret current trends, analyze past experience, and project future costs—in short, to advise management correctly and simply in one of the most important and expensive business operations—may depend the continued stability, the smooth operation, and in fact the very existence of his company.

The Years of Achievement

THE 30's ARE man's most creative time of life in the arts and sciences, but greatest leadership comes in the 50's, concludes Harvey C. Lehman in his book *Age and Achievement*. The typical creative thinker produces valuable work during most of his life, with his creativity declining only slowly from its early peak.

The time gap between creativity and leadership appears to be increasing, says Mr. Lehman. A study of Cabinet members from 1789 to 1824 shows a median age of 46; from 1925 to 1945 it was 60. The greatest number of top-ranking Civil War generals were between 40 and 44; in World War II the peak ages were 57 to 61. Most college presidents are 50 to 54, and most U. S. senators are 60 to 64.

—Commerce, Vol. 50. No. 12

Guard Those You Love—Give to Conquer Cancer!

Survey of Books for Executives

STEADIER JOBS: A Handbook for Management on Stabilizing Employment. Industrial Relations Counselors, Inc., 1270 Sixth Avenue, New York 20, N. Y. 1954. 125 pages. \$2.25.

*Reviewed by Frank H. Cassell**

The authors of this book have distilled from both theory and a rich background of experience a practical guide for business men who are concerned with the problems of employment stabilization. They believe that, though the individual employer may have little or no control over the factors that cause cyclical ups and downs in over-all economic activity and employment, management can exercise considerable control over the factors that cause seasonal and other short-term fluctuations in employment within the individual plant. This, of course, would result in a steadier flow of employee income throughout the year and might also have some effect in reducing variations from year to year.

How practical and useful this book can be to business is evident from the manner in which the subject is developed. The book begins with an excellent section on how to gather, summarize, and analyze information relative to employment stabilization. Step by step the reader is guided through policy formulation, program development, assignment of executive responsibility, activation of programs, and evaluation and communication of results.

Although there are many outstanding books on each of the business functions—such as market forecasting, production planning, sales policy, and purchasing and personnel practices—this is one of the

few books which considers these functions in terms of their respective contributions both to one another and to the stabilization of employment.

A new and perhaps unique contribution of this book is the chapter on community and inter-company action to stabilize the community employment structure and to facilitate movement of the community's labor force. Industries and individual firms may rise and prosper, while others decline. The authors believe appropriate community action will contribute to more stable employment patterns. They make concrete suggestions for diversifying the community economic structure, scheduling public works, facilitating the transfer of workers between plants, and improving the skills and capabilities of the community work force.

This is a book which personnel managers and purchasing, production, and sales executives will find of value in planning programs of employment stabilization. It does not presume to deal directly with the guaranteed annual wage, although of course there is an inevitable link in the minds of many between stabilization of employment and the current controversy over union demands for the GAW.

This reviewer would like to have seen included in this volume a discussion of another very important aspect of employment stabilization: namely, the regularization of business investment. Although much that has been written on this subject is theoretical, the possibilities of achieving employment stabilization through investment policy should be receiving the earnest consideration of the business community.

* Manager, Industrial Relations, Inland Steel Company.

THE SHOCKING HISTORY OF ADVERTISING. By E. S. Turner. E. P. Dutton & Company, Inc., New York, 1953. 351 pages. \$4.50.

*Reviewed by James M. Black**

"Most Excellent and Approved Dentrifice to scour and cleanse the teeth making them white as Ivory, preserves from the toothache; so that, being constantly used, the Parties using it are never troubled with the toothache. . . ." Sounds familiar, doesn't it? Well, that's come-on copy hot from the pen of a 17th-century ad-man putting the pitch on a contemporary toothpaste. And from it you can see that though fashions change, though captains and kings depart, the advertising man is always with us. And he isn't given to understatement.

E. S. Turner has taken a long look at advertising practices, past and present. The result is a book that will give a pleasant evening of reading not only to professionals in this field but to the intelligent layman who wants to be entertained while he is being informed. Although it is hardly the author's purpose to infra-dig the profession of advertising, so necessary to an enterprise economy, he does show how social customs from the 17th century to the present are responsible for the good in advertising, as well as the grotesque.

Mr. Turner writes with a delightful tongue-in-cheek humor. And he knows his subject. Some of the examples of advertising that he picks to illustrate his points are gems. For example, I had never realized that lady wrestlers had much of a following before TV came along. But Mr. Turner tells of an enterprising promoter of wrestling back around 1750 who steamed up public interest in a match by putting an ad in the local gazette of Whitechapel, England, to the effect that his girl, a certain Mary Brindle—who possessed "extraordinary Skill, Judgment and peculiar Dexterity in the noble

Science of handling the Members"—was willing to take on all comers in catch-as-catch-can. Of course, a modern promoter undoubtedly would have referred to Miss Brindle as "Mighty Meg, the Glamorous Amazon of the Mat" and illustrated his announcement with some of the fetching cheesecake that is so much deplored by Senator Kefauver. But the principle is the same.

Despite Miss Brindle's fearsome reputation, her challenge was quickly accepted. A young lady—appropriately enough named Mary Sturdy—replied in another ad that she would not fail of meeting this celebrated Heroine and doubted not that she would soon convince her of her folly and vanity in attempting to contend with one who possessed so great a share of innate courage so peculiar to her famous Hibernian ancestors.

Both ads, incidentally, were written in the first person. This indicates one of two things: Either 18th-century lady wrestlers were highly literate or they employed competent ghosts to do their writing for them—a practice not unheard of today.

Some of the ads Mr. Turner quotes bring back nostalgic memories. One, in particular, tore the flyleaf off the pages of the past for me. The ad pictures a group of the younger set—circa 1928—hotting it up of an evening. One man is boldly advancing to the piano. The copy beneath the picture reads, "They laughed when I sat down at the piano—but when I started to play!" Anybody over 35 can carry on from there. Another mail-order social hero had been born. This ad came out about the time that John Held, Jr., had skyrocketed to fame with his drawings of flappers and their ukelele-playing boy friends all togged out in yellow raincoats which served—the raincoats, that is—as palimpsests for current wisecracks.

Mr. Turner's book tells the story of advertising from the days of bull-baiting to the commercial jingle. The pages of the

* Manager, Personnel Division, American Management Association.

coffee-house journals come to life once again with their advertisements of everything from houses of assignment to *Harris' List of Covent Garden Ladies: or Man of Pleasure's Kalendar*. When the author turns his attention to America, he traces advertising methods from P. T. Barnum and the war of Hearst and Bennett over taste in advertising to the rise of soap manufacturers. The story is wittily and urbanely told, as indeed it deserves to be. For advertising is the social chronicle—by no means dry-as-dust—of the fears and hopes of humanity and the concomitant human tendencies to exaggeration and gullibility.

As long as people are people, I guess there'll always be an ad-man. Come to think about it, it's a pretty good thing, too. For despite his faults—which include a tendency to overstatement—by and large he's done a right good job. And his story, in the capable hands of E. S. Turner, has produced a tip-top book.

PERSONNEL MANAGEMENT AND WELFARE. By F. H. C. Brook. Burke Publishing Co., Ltd., London, England. Available in U. S. A. from Anglobooks, 475 Fifth Avenue, New York 17, N. Y. 1953. 287 pages. \$5.00.

*Reviewed by Bridgford Hunt**

It is always intriguing for men to compare the various facets of independent contemporary cultures. *Personnel Management and Welfare*, by F. H. C. Brook, gives Americans a unique opportunity to compare similar types of personnel organizations in the United States and England, for Mr. Brook has presented concisely and forcefully his concept of how the ideal personnel organization is established in the latter country.

The large manufacturing organization is the object of his study. He has pre-

sented his facts in a manner similar to that of an organization chart which deals with job positions and their functions. With revisions to suit individual cases, a complete personnel operation could be established by using Mr. Brook's clear outline.

Mr. Brook has been eminently successful in indicating the scope and character of English personnel work as it appears to him today. In so doing he has found it necessary to state a number of principles. Unfortunately, the comprehensive nature of his subject requires more pages, if not more volumes, for an adequate explanation and substantiation of even the less controversial issues. Though he has expertly delineated the details of some personnel activities, he has not explained sufficiently many of his principles—even those pertaining to the more important spheres of personnel work. The result is somewhat like passing the ovens of a bakery where the aroma is tantalizing but where there is no opportunity to stop and taste the food. The unsatisfied feeling resulting from this experience is the major criticism to be directed at Mr. Brook's presentation. Obviously, to have clarified each and every statement would have been impossible. However, a clearer definition of the objectives of management and their relationship to personnel would have been apropos, especially for the uninitiated who are sometimes inclined to question the necessity for "personnel" as a function.

There are many chapters in the book devoted to industrial health measures, including physical examinations and psychiatric assistance, as well as the intricate employee health records which are required in England. This is undoubtedly a reflection of the present emphasis on welfare in Great Britain, just as the inclusion of the word "welfare" in the book title itself is indicative of the importance which the author and many people in his country attach to this subject.

Mr. Brook briefly mentions the economic justifications for personnel departments,

* Personnel Manager, Pfizer International Service Co., Inc., New York.

though he defines management's primary function in terms of production. This, too, probably reflects the dire need for production in Great Britain. Here the comparison becomes difficult, for the American business organization is different in that its ultimate objective is found in the long-term results of the profit and loss statements. Many economic factors influence a business in the U. S., whereas

apparently the need for the production and export of goods for the survival of the British economy is of overriding importance there.

Most personnel managers in the United States would gain little by reading this book, except where a branch operation is contemplated in England or where a comparison for its own sake has some special interest.

Briefer Book Notes

[Please order books directly from publishers]

PAYING FOR MEDICAL CARE IN THE UNITED STATES. By Oscar N. Serbein, Jr. Columbia University Press, New York, 1953. 543 pages. \$7.00. This research study assembles and analyzes numerous materials, collected by a number of organizations and individuals, on the prevalence of illness in the U. S., the cost of illness, and methods of paying for medical care. Major attention is given to the role of business in providing medical care, prepayment plans, government medical care programs, and problems in evaluating payment programs. Such questions as the following are considered: Where did the \$11 billion spent on illness in 1951 come from, how was it used, and what proportion of the population did it serve? Have such plans as Blue Cross and Blue Shield worked out to the satisfaction of doctors and hospitals as well as to the benefit of the insured? What is the enrollment potential for all the various medical care insurance plans?

GUIDE TO AMERICAN DIRECTORIES FOR COMPILING MAILING LISTS. B. Klein & Company, 27 East 22 Street, New York 10, N. Y. 1954. 108 pages. \$10.00, including three bi-monthly supplements. Lists current business directories and publications, describes where these mailing list sources may be obtained, and states the price, if any. Trade and professional categories covered in the listings include retailers, manufacturers, wholesalers, professional people, institutions, and consumers.

BETTER SALES THROUGH CREDIT. By Joseph L. Wood. Vantage Press, Inc., New York, 1954. 163 pages. \$3.00. Without minimizing credit's important function as a financial device for preventing and controlling losses, the author, a seasoned financial and sales executive, lays primary emphasis in this comprehensive discussion of credit on its potentialities as a sales- and profit-making technique. Numerous case histories are cited to show the advantages of this approach, which leads logically to an equal partnership of credit and sales and the concept of credit as the "business extension department."

INDUSTRIAL TRAFFIC MANAGEMENT. By Newton Morton and Frank H. Mossman. The Ronald Press Company, New York, 1954. 558 pages. \$6.50. Presented primarily from the standpoint of the shipper, the material in this book is divided into the following principal divisions: classifications and tariffs, operations of the traffic department, carrier practices on service, other methods of shipping, and freight claims. Special attention is given to motor carrier and export-import shipments. Court cases and ICC decisions are cited, and appendices are devoted to different kinds of freight rates, traffic associations, provisions of the Bill of Lading Act, and a glossary of traffic terms and abbreviations.

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AMERICAN MANAGEMENT ASSOCIATION

Ten Commandments of Safety

FOR SUPERVISORS

Your job in management places you in a unique position of trust. For not only does the company rely on you, as the direct representative of management, to apply its policies wisely and fairly; also entrusted to you is the obligation to safeguard the well-being of the workers in your charge. No responsibility transcends this in importance. In this respect your job is akin to the "stewardship" of biblical days: As a supervisor, you are indeed your brother's keeper.

On-the-job accidents represent a serious threat to the physical well-being of your men. Their prevention calls for your constant vigilance. Therefore, if you would guide your men safely through their daily work, be yourself guided by these precepts:

1. You are a supervisor and thus, in a sense, have two families. Care for your people at work as you would care for your people at home. Be sure each of your men understands and accepts his personal responsibility for safety.
2. Know the rules of safety that apply to the work you supervise. Never let it be said that one of your men was injured because you were not aware of the precautions required on his job.
3. Anticipate the risks that may arise from changes in equipment or methods. Make use of the expert safety advice that is available to help you guard against such new hazards.
4. Encourage your men to discuss with you the hazards of their work. No job should proceed where a question of safety remains unanswered. When you are receptive to the ideas of your workers, you tap a source of first-hand knowledge that will help you prevent needless loss and suffering.
5. Instruct your men to work safely, as you would guide and counsel your family at home—with persistence and patience.
6. Follow up your instructions consistently. See to it that workers make use of the safeguards provided them. If necessary, enforce safety rules by disciplinary action. Do not fail the company, which has sanctioned these rules—or your workers, who need them.
7. Set a good example. Demonstrate safety in your own work habits and personal conduct. Do not appear as a hypocrite in the eyes of your men.
8. Investigate and analyze every accident—however slight—that befalls any of your men. Where minor injuries go unheeded, crippling accidents may later strike.
9. Cooperate fully with those in the organization who are actively concerned with employee safety. Their dedicated purpose is to keep your men fully able and on the job and to cut down the heavy personal toll of accidents.
10. Remember: Not only does accident prevention reduce human suffering and loss; from the practical viewpoint, it is no more than good business. Safety, therefore, is one of your prime obligations—to your company, your fellow managers, and your fellow man.

By leading your men into "thinking safety" as well as working safely day by day, you will win their loyal support and cooperation. More than that, you will gain in personal stature. Good men do good work for a good leader.

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Note: Copies of AMA's "Ten Commandments of Safety," suitable for framing (in two colors, size 9" by 12", on deckle-edge stock) may be obtained from the Association's headquarters at the following prices: single copy, 25¢; 2-24 copies, 18¢; 25-49 copies, 15¢; 50-99 copies, 12¢; 100-499 copies, 11¢; 500-999 copies, 10¢; 1,000 copies and over, 9 1/2¢.

(Orders under \$5.00 should be accompanied by remittances. Sales tax should be included in remittances for New York City orders.)



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